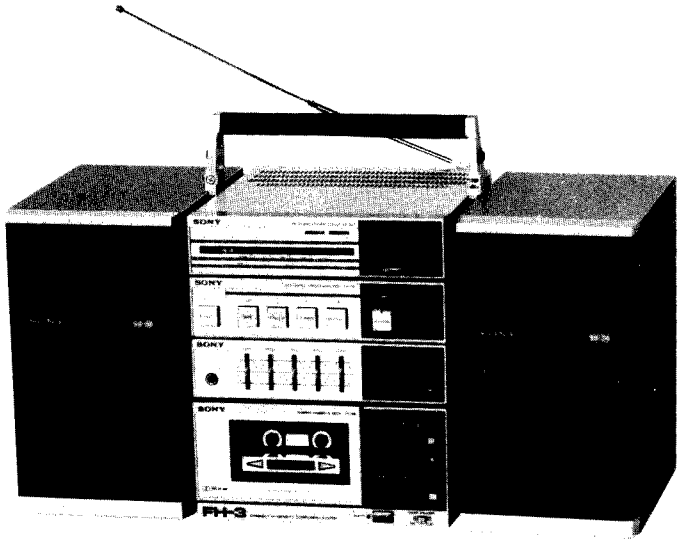
FH-3

SERVICE MANUAL

AEP Model
UK Model



'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

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MICROFILM

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

COMPACT HI-DENSITY COMPONENT SYSTEM

SONY®

AUD

TA-38

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SS-38

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4. PARTS LIST SS-2

SPECIFICATIONS

ST-38

System: FM stereo, FM/AM superheterodyne tuner, PLL multiplex circuit

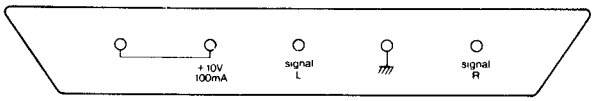
FM tuner section

Tuning range	87.5—108 MHz
Antenna	Telescopic antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz
Usable sensitivity	3 μV, S/N = 30 dB/75 ohm
Signal-to-noise ratio	75 dB (mono), 70 dB (stereo)
Harmonic distortion	0.5% (mono), 1% (stereo) at 1 kHz
Separation	Better than 40 dB at 1 kHz
Selectivity	55 dB (400 kHz)

MW/LW tuner section

		MW	LW
Tuning range		531—1,602 kHz	153—344 kHz
Antenna		Built-in ferrite bar antenna, External antenna terminal	
Intermediate frequency		450 kHz	450 kHz
Usable sensitivity (S/N 20 dB)	built-in antenna	250 μV/m (1,000 kHz)	500 μV/m (230 kHz)
	external antenna	100 μV (1,000 kHz)	150 μV (230 kHz)
Signal-to-noise ratio (50 mV/m)		52 dB	52 dB
Harmonic distortion (50 mV/m, 400 Hz)		0.5%	0.5%
Selectivity		30 dB (9 kHz)	40 dB (9 kHz)

5-pin DC output connector of TA-38 unit (to ST-38)



General

Dimensions	Approx. 215 × 55 × 245 mm (w/h/d) (8½ × 2⅛ × 9¾ inches) incl. projecting parts and controls
Weight	Approx. 0.9 kg (2 lb.) net

TC-38

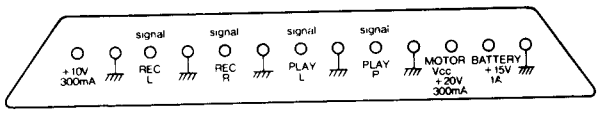
Recording system	4-track 2-channel stereo
Frequency response	DOLBY NR OFF (DIN)
	With TYPE IV cassette (Sony METALLIC cassette)
	60 - 16,000 Hz (±3 dB)
	With TYPE II cassette (Sony UCX cassette)
	60 - 15,000 Hz (±3 dB)
	With TYPE I cassette (Sony BHF cassette)
	60 - 14,000 Hz (±3 dB)
Wow and flutter	0.07% WRMS (NAB)
	±0.2% (DIN)

General

Dimensions: Approx. 215 × 105 × 240 mm (w/h/d) (8 1/2 × 4 1/4 × 9 1/2 inches) incl. projecting parts and controls

Weight: Approx. 2.6 kg (5 lb 12 oz) net

13-pin DC output connector of TA-38 unit (To TC-38)



Tape Transport Mechanism Type	TCM-130R10

TA-38

Continuous RMS power output
25 + 25 watts
(4 ohms, at 1 kHz, 5% THD)

Inputs

	Sensitivity	Impedance
PHONO	2.5 mV	50 kilohms
CD/AUX	250 mV	50 kilohms
MIC	1 mV	Low Impedance

Frequency response: PHONO: RIAA curve ± 0.5 dB
CD/AUX: 30 Hz - 40 kHz $^{+0}_{-3}$ dB

Outputs
HEADPHONES: Accepts headphones of 8 ohms or more
SPEAKER: Accepts speakers of 4 to 16 ohms
PREOUT level/impedance = 250 mV/4.7 kohms

General

Dimensions: Approx. 215 × 105 × 240 mm (w/h/d) (8 1/2 × 4 1/4 × 9 1/2 inches) incl. projecting parts and controls

Weight: Approx. 3.3 kg (7 lb 5 oz) net

Power requirements: AEP model: Operates on 220 V ac
UK model: Operates on 240 V ac

SS-38

Speaker system: 2-way speaker system
Woofer: 10 cm
Tweeter: 5 cm

Power handling capacity: Nominal 25 watts

Frequency range: 75 Hz - 20 kHz

Sensitivity: 90 dB/W/m

Impedance: 4 ohms

General

Dimensions: Approx. 160 × 260 × 230 mm (w/h/d) (6 3/8 × 10 1/4 × 9 1/8 inches)

Weight: Approx. 2.7 kg (6 lb) net per unit

General

Power requirements: AC power input accepts:
AC power cord (supplied) for use on
220 V ac, 50/60 Hz (AEP Model) and
240 V ac, 50/60 Hz (UK Model)
DC IN 12 V jack accepts:
DCC-16AW car battery cord (optional)
for use on 12 V car battery
15 V dc, ten batteries size D
(IEC designation R20)

Power consumption: 65 watts

Dimensions: Approx. 535 × 330 × 245 mm (w/h/d) (21 × 12 7/8 × 9 5/8 inches) incl. projecting parts and controls

Weight: Approx. 13.4 kg (29 lb 9 oz) net
Approx. 14.5 kg (32 lb) in shipping carton

FEATURES

The Sony FH-3 is a compact high-density component system consisting of an FM stereo/FM-AM tuner, a high quality cassette deck, and integrated amplifier. You can take it anywhere so that you can enjoy a variety of program sources—broadcast programs, taped programs, etc., anytime you like.
Each component matched to the FH-3 is the equal of fine separate components and has the following features:

- Three different power sources: house current, batteries and 12 V car battery.
- The connectable carrying handle makes the FH-3 carriable as a small suit case.

Amplifier section

- CD/AUX input jacks for connecting a CD (compact disc) player, external tuner or cassette deck and phono input jacks for listening to records.
- MIC jack for mixing sound from an external microphone, with other sound sources.
- The sound adjusted by the equalizer or mixed with other sound sources can be recorded onto another cassette deck through the PRE OUT jacks.
- Permits headphones to be connected. Their volume is adjustable.
- This section supplies power to the tuner and cassette deck.

Tuner section

- High sensitivity and high selectivity.
- The PLL multiplex circuit assures stable FM reception.
- Built-in telescopic antenna for FM and reception and external antenna terminals.

Cassette deck section

- The cassette deck can use the metal tapes, providing wider dynamic range and extended frequency response.
- Auto-reverse function enables you to repeat playback of both sides of the cassette, once or continuously.
- Automatic Music Sensor (AMS) allows easy playback of the selection being played and easy skipping to the next selection.
- The automatic recording control system sets the recording level automatically.
- The record muting function allows you to eliminate material you do not want to record, such as commercials, and to make a blank space between selections.
- The Dolby NR (noise reduction) system reduces tape hiss and assures high quality recording and playback.

MODEL IDENTIFICATION

(TC-38 & SS-38 have no differences between AEP and UK models.)

- This label is sticked on TA-38. ... For WEST GERMANY

SONY® MODEL NO. FH-3

COMPACT HI-DENSITY COMPONENT SYSTEM

ST-38 : FM STEREO/FM-AM TUNER
TA-38 : INTEGRATED STEREO AMPLIFIER
TC-38 : STEREO CASSETTE DECK
SS-38 : SPEAKER SYSTEM

AC: 220 V ~ 50/60 Hz 65 W

FTZ 11/585

SERIAL NO.
MADE IN JAPAN

ST-38

SONY® MODEL NO. ST-38

FM STEREO/FM-AM TUNER
COMPACT HI-DENSITY COMPONENT SYSTEM FH-3

FREQUENCY RANGE: [ ] ← { FM: 87.5 – 108 MHz ... AEP, UK Model / FM: 87.6 – 108 MHz ... For WEST GERMANY

MW: 522 – 1602 kHz LW: 153 – 344 kHz
IF FM; 10.7 MHz AM; 450 kHz

SERIAL NO.
MADE IN JAPAN

TA-38 ... Except for WEST GERMANY

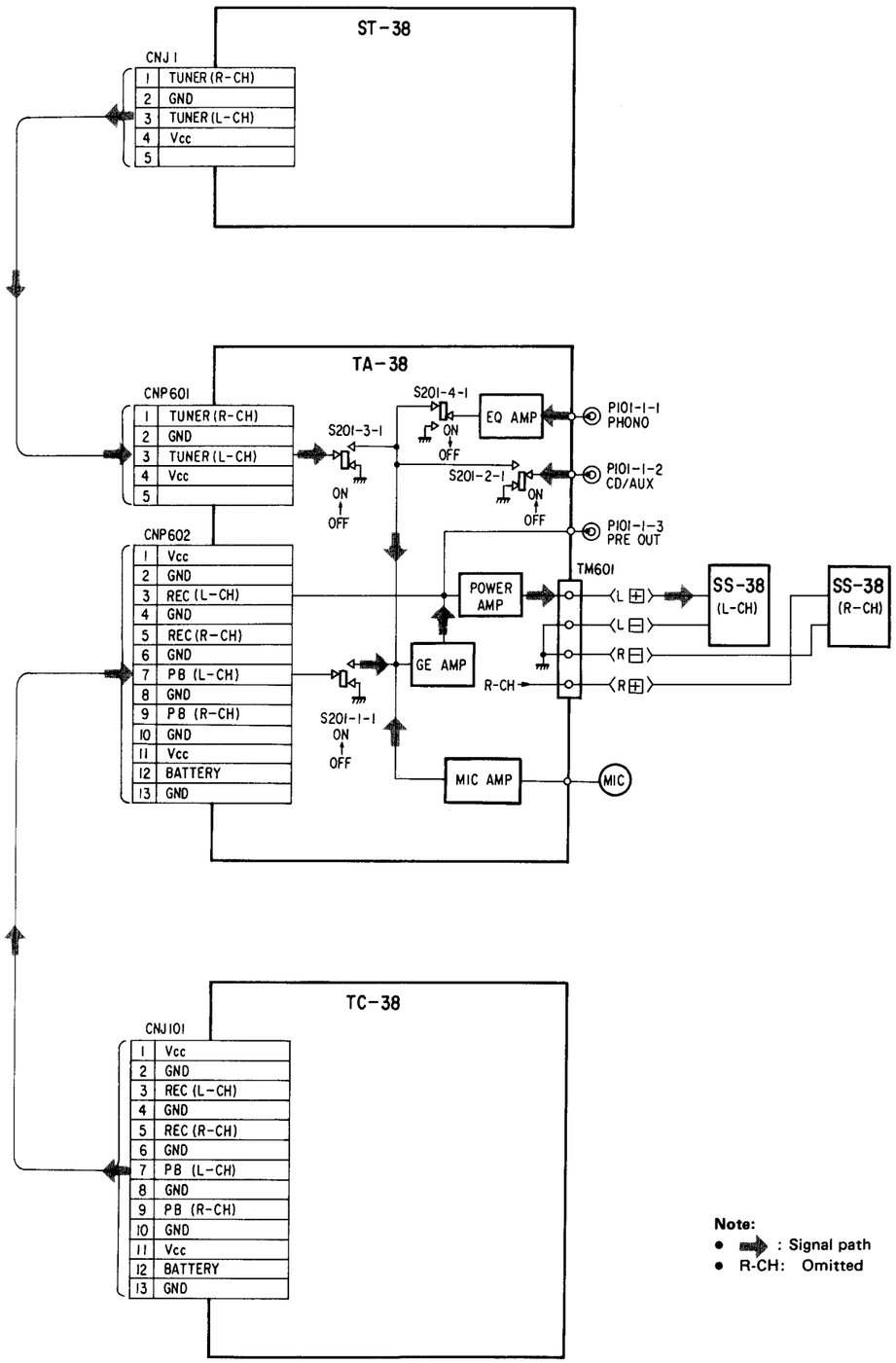
SONY® MODEL NO. TA-38

INTEGRATED STEREO AMPLIFIER
COMPACT HI-DENSITY COMPONENT SYSTEM FH-3

AC: 220 V ~ ... AEP Model / AC: 240 V ~ ... UK Model → [ ] 50/60 Hz 65 W

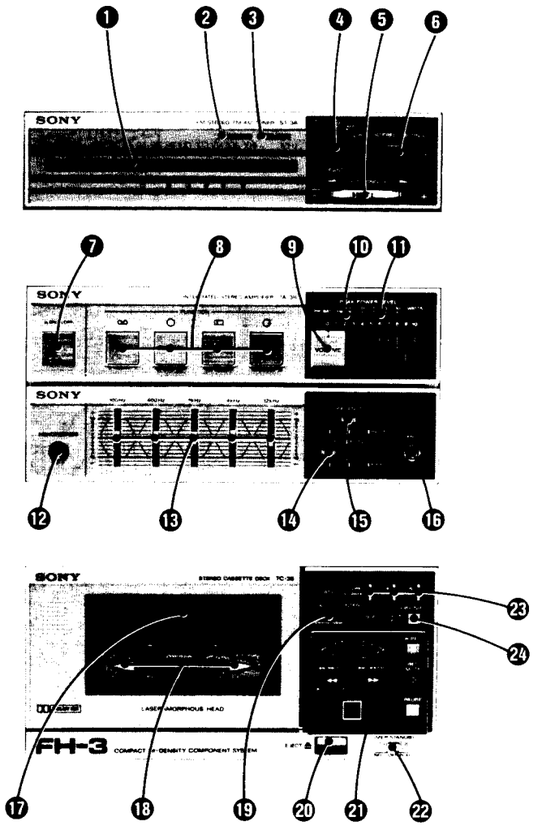
SERIAL NO.
MADE IN JAPAN

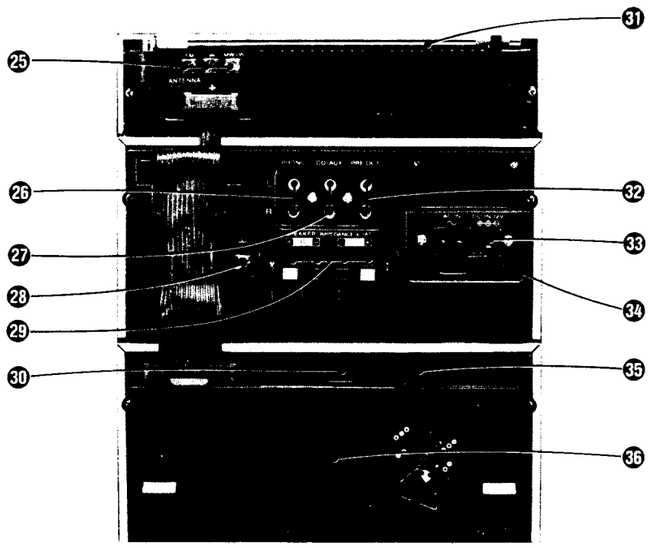
CONNECTION BETWEEN EACH SET AND SIGNAL PATH



Note:
- ➡ : Signal path
- R-CH: Omitted

FUNCTION OF CONTROLS





Tuner ST-38

❶ Frequency Scale
Permits reading of the received frequency.

❷ STEREO indicator
This indicator will light when an FM stereo program of sufficient signal strength is tuned in.

❸ TUNED indicator
Lights up when a signal is tuned in accurately.

❹ BAND selector
Selects the desired band.
FM, MW or LW.
For FM reception, normally set to FM. When it is difficult to hear the broadcast due to noise, set the STEREO/MUTING switch to OFF. The reception will be more stable and noise will be reduced

❺ Tuning knob
Turn the tuning knob to the left (–) to go to a lower frequency and to the right (+) to go to a higher.

❻ STEREO/MUTING button
This button serves the dual purpose of a mode and FM muting switch. Normally keep this switch depressed (⎓ ON) to eliminate FM interstation noise while tuning from station to station. The tuner operates in stereo mode for stereo sound sources and will be automatically switched to mono mode for monaural sound sources.

Amplifier TA-38

❼ POWER switch
Press to turn on the powers of amplifier, tuner and cassette deck. To turn them off, press it again.

❽ Function selectors
Press the desired program source button.
TAPE : For taped programs.
CD/AUX : For compact disc or auxiliary programs connected to CD/AUX jacks.
TUNER : For broadcasting programs.
PHONO : For disc programs connected to PHONO inputs.

❾ VOLUME control
This controls the overall output level.

❿ OPR/BATT indicator
This indicator lights up while the unit is in operation. On battery operation, this also shows the battery condition. When the batteries become weak while the unit is in operation, the OPR/BATT indicator will glow faintly or flicker. When the batteries are exhausted completely, the indicator will not light.

⓫ PEAK POWER LEVEL meters
These meters show the output level of the power amplifier.

⓬ HEADPHONES jack
Accepts headphones with a stereo phone plug. The headphone volume can be adjusted with the volume control.

⓭ Graphic equalizer controls
Slide the controls downwards or upwards to equalize the reproduced sound. To cut equalization, set the controls to 0 (center position).

⓮ MIC LEVEL control
This controls the input level of the microphone.

⓯ BALANCE control
This controls the balance of the left and right channel output level. Normally set the control to the center position.

⓰ MIC jack
Connect a microphone with a phone plug to the MIC jack. For connecting a microphone with a mini plug, use the plug adaptor Sony PC-2M (optional). Disconnect the microphone when not in use.

Cassette deck TC-38

⓱ Cassette holder

⓲ Tape direction indicators
During playback or recording, one of the indicators illuminates to show the direction of the tape transport.

⓳ TAPE COUNTER and reset button
The tape counter provides a numerical reference point while recording which can be used to index a recorded cassette. To reset to zero, press the reset button.

⓴ ⏏ (eject) button
Press this button to open the cassette holder.

㉑ Function buttons
It is possible to switch directly from one mode to another.
▶ (forward) button : Press this button to play back the front side of the cassette. The tape is transported to the right.
▶▶ (fast-forward) button : Press this button to advance the tape rapidly to the right.
● (record) button : Press this button together with the ▶ button to start recording. The indicator will illuminate.
■ (stop) button : To stop the tape, press this button.
❚❚ (pause) button : To stop the tape for a moment during recording or playback, press this button. To restart, press this button again. This button is also used to control more precisely the start of recording and to release the record muting mode. This button also operates during playback of the reverse side.
○ (record muting) button : Press this button to eliminate unwanted material and to insert a blank space during recording.
◀ (reverse) button : Press this button to play the back side of the cassette.
◀◀ (fast-reverse) button : Press this button to advance the tape rapidly to the left.

㉒ TIMER STANDBY switch
You can set the unit to record or play back at a predetermined time by connecting any commercially available timer. To record, set this TIMER STANDBY switch to REC. To playback, set it to PLAY.

㉓ TAPE select buttons
Depress an appropriate button according to the type of tape to be used.

㉔ DOLBY NR switch
To record with the Dolby NR* (Noise Reduction) process, depress this switch . To record without the Dolby NR process, press again and release this switch.
When playing back, set this switch to the same position used in recording.
* "Dolby" and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

rear panel

㉕ External antenna and ground terminals

㉖ PHONO input jacks
For connecting an optional turntable system.

㉗ CD/AUX jacks
For connecting a CD player, additional tuner, cassette deck, etc.

㉘ Ground terminal (⏚)
For connecting the ground wire of a turntable system.

㉙ Speaker terminal
Connect the speaker system SS-38 with the supplied speaker cords.

㉚ ISS (Interference suppress switch)
If interference is encountered while recording MW or LW program, slide the switch to 2 or 3 position depending on which best reduces the noise. Normally set the switch to 1 position.

㉛ Telescopic antenna
Used for FM reception.

㉜ PRE OUT jacks
For recording on to an additional cassette deck the sound adjusted by the equalizer or the sound mixed with sources.

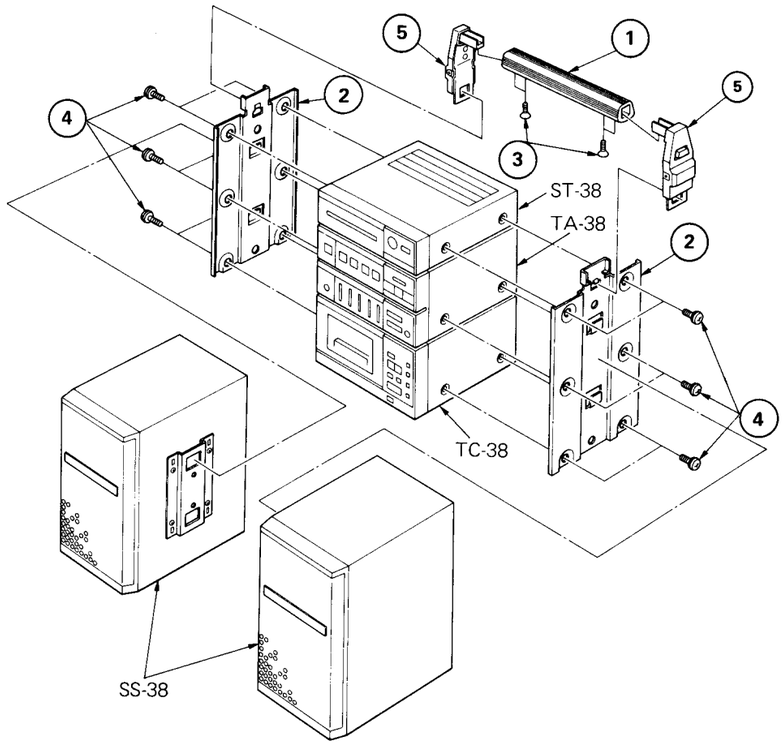
㉝ Car battery cord jack
For connecting use the optional Sony DCC-16AE connecting cord.

㉞ AC power input

㉟ DIRECTION MODE switch
⇄ : for repeat playback of both sides of a cassette.
→ : for playing back from the front to the reverse side once only.
If playback begins with the reverse side, the tape will stop after this side is played back once.

㊱ Battery compartment

EXPLODED VIEW AND PARTS LIST



GENERAL SECTION

No.	Part No.	Description
1	2-249-402-21	HANDLE
2	4-902-945-01	(SILVER).... PLATE (A), SIDE
2	4-902-945-11	(BLACK).....PLATE (A), SIDE
2	4-902-945-21	(RED).....PLATE (A), SIDE
3	7-685-247-29	SCREW +KTP 3X10 TYPE2 SLIT
4	X-4902-909-1	SCREW ASSY, SIDE PLATE
5	X-4902-924-1	BRACKET ASSY, HANDLE

ACCESSORY & PACKING MATERIAL

Part No.	Description
⚠ 1-551-218-00	(UK)....CORD, POWER (DK-50)
⚠ 1-555-234-11	(AEP,G-AEP)...CORD, POWER
1-555-839-00	CORD, SPEAKER
3-309-143-00	(TA-38, TC-38)...BAG, PROTECTION
3-701-308-00	(BLACK).....LABEL, PRODUCT COLOR
3-701-311-00	(RED).....LABEL, PRODUCT COLOR
3-703-729-00	(SILVER)....LABEL (SMALL), COLOR

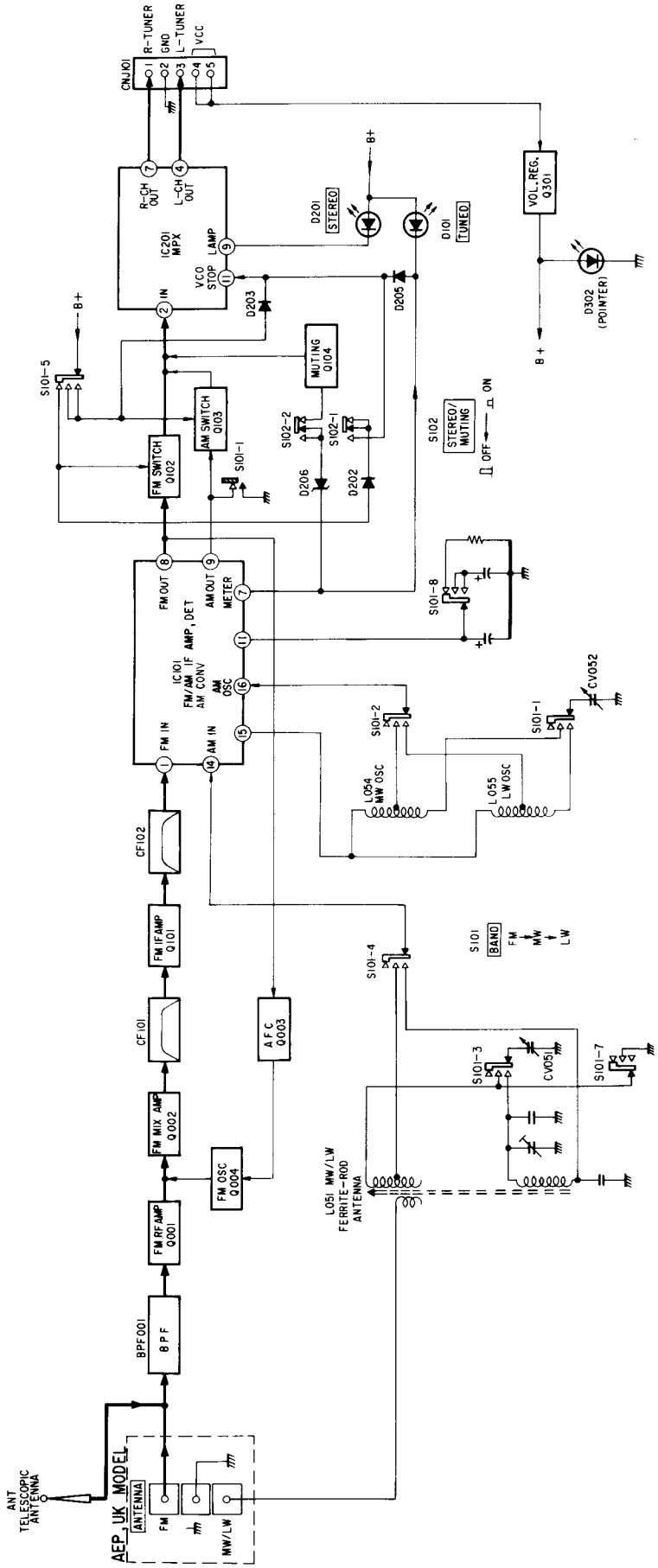
NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-701-613-00	BAG, POLYETHYLENE (FOR SCREW ASSY)
3-701-630-00	BAG, POLYETHYLENE (FOR PRINTED MATTER)
3-703-538-01	(G-AEP)...INSTRUCTION, FTZ
3-773-780-11	(AEP).....MANUAL, INSTRUCTION
3-773-780-31	(AEP).....MANUAL, INSTRUCTION
3-773-780-41	(G-AEP)....MANUAL, INSTRUCTION
3-773-780-51	(AEP,UK)...MANUAL, INSTRUCTION
3-793-828-11	QUESTIONNAIRE
3-795-571-11	INSTRUCTION
4-883-916-00	(SS-38)...BAG, PROTECTION
4-883-917-00	(SS-38)...CUSHION
4-884-884-00	(ST-38)...SHEET, PROTECTION
4-884-885-00	SHEET, PROTECTION (FOR SIDE PLATE)
4-884-945-00	PARTITION
4-902-985-01	CUSHION (UPPER)
4-902-995-01	PARTITION
4-902-996-01	BOX, ACCESSORY
4-905-306-01	INDIVIDUAL CARTON
X-3701-105-0	ROD ASSY, CLEANING, HEAD
X-4902-928-1	CUSHION ASSY, LOWER

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 1
BLOCK DIAGRAM



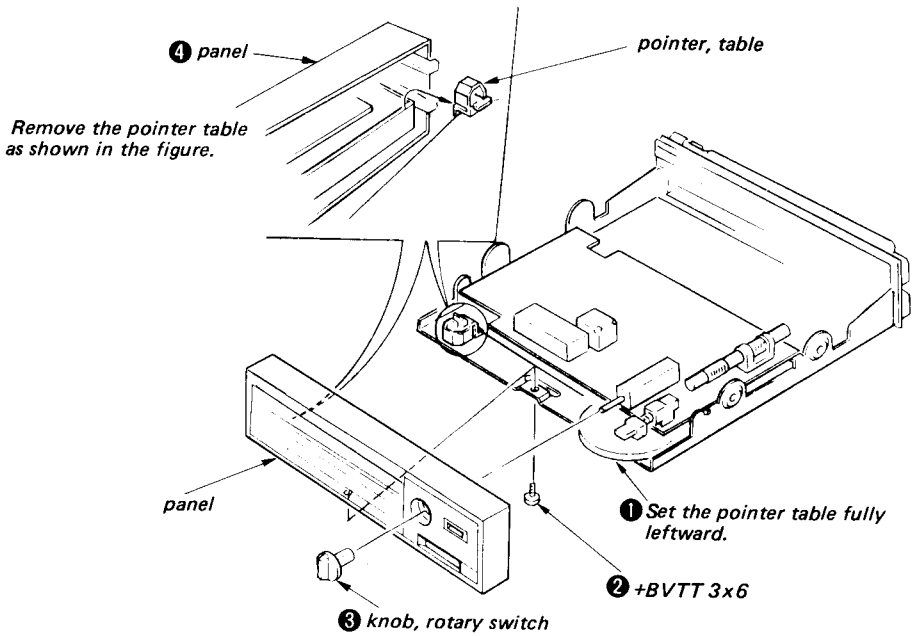
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

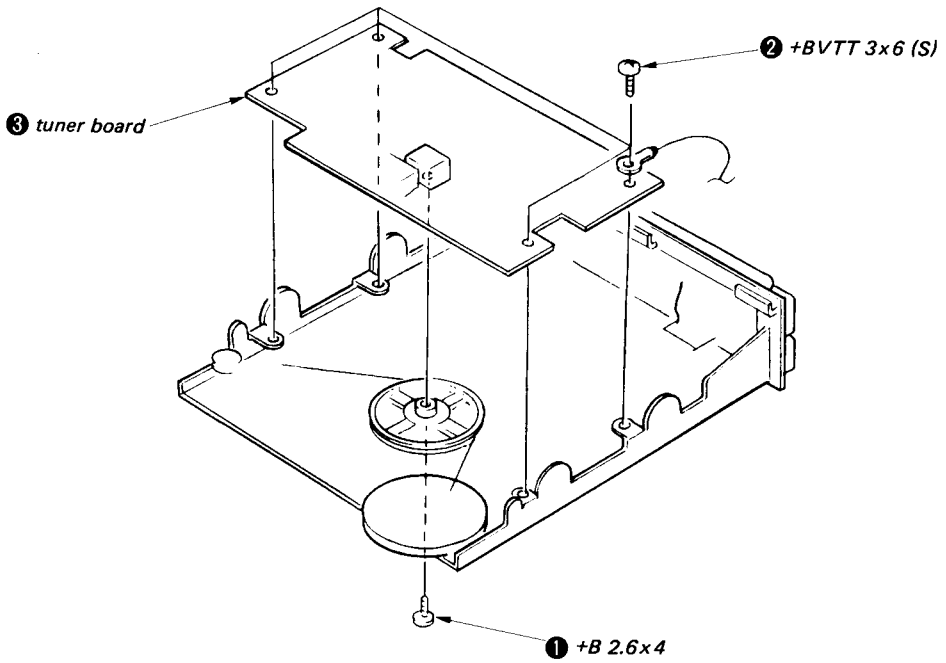
CASE REMOVAL

Remove case by taking out four screws.

PANEL REMOVAL

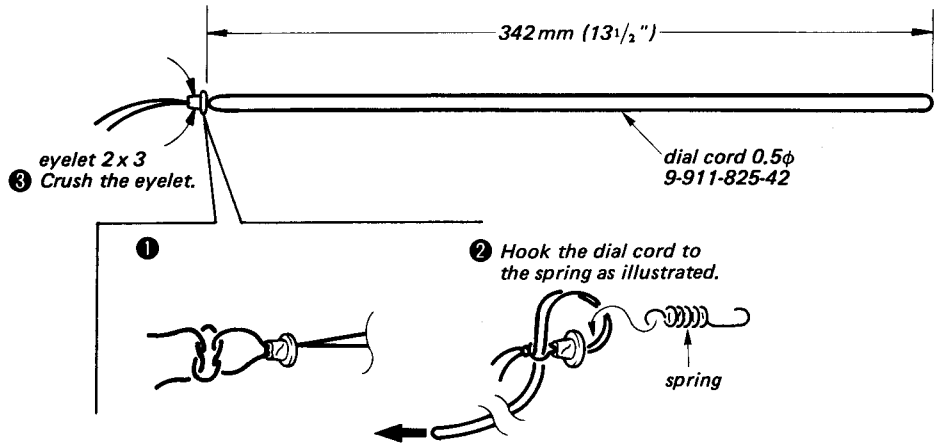

❹ panel
pointer, table
Remove the pointer table as shown in the figure.
panel
❶ Set the pointer table fully leftward.
❷ +BVTT 3x6
❸ knob, rotary switch

TUNER BOARD REMOVAL



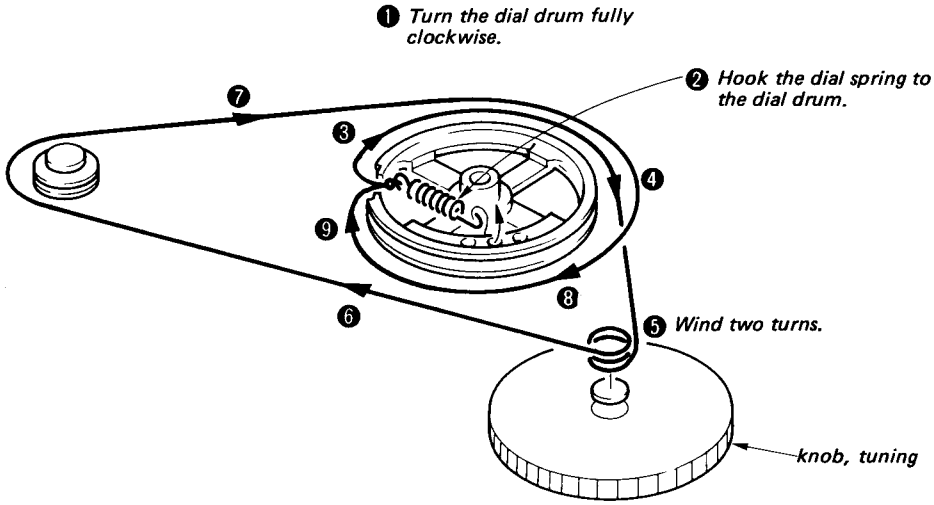
DIAL CORD STRINGING

1) Preparation

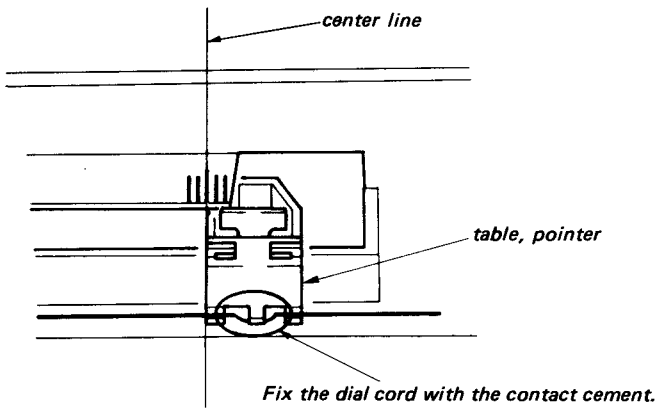


2) Stringing

- String the dial cord in the numerical order given.



3) Pointer Setting



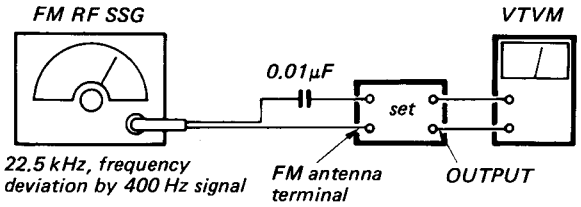
SECTION 3
ADJUSTMENTS

FM

- **Setting:**

  BAND Switch: FM
  STEREO MUTING Switch: OFF

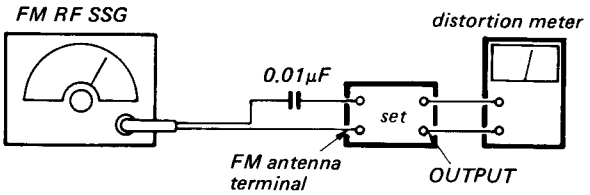
- **Procedure:**



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM Discriminator Adjustment

Setting:



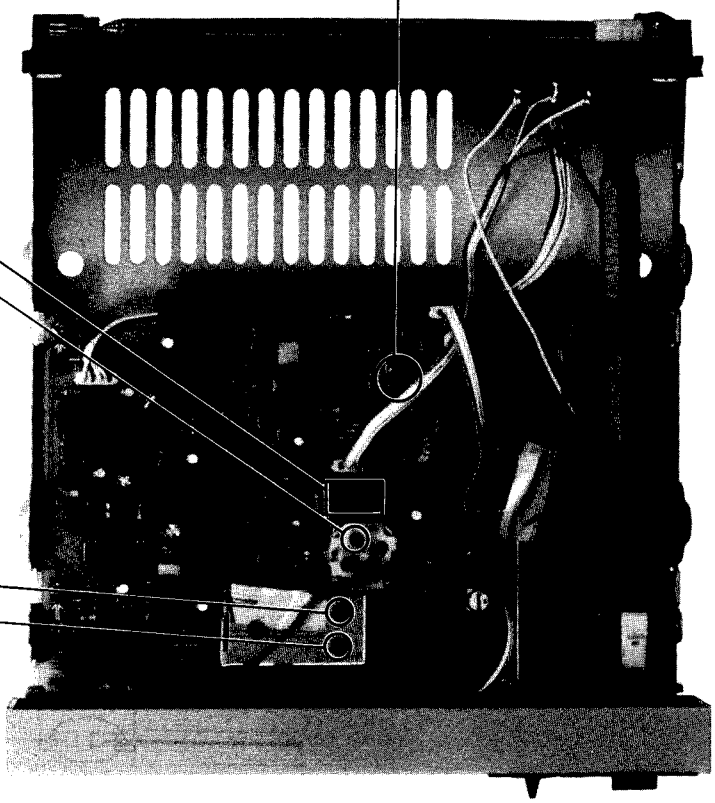
Carrier frequency:	*98 MHz*
OUTPUT level:	*1 mV (60 dB)*
Modulation:	*400 Hz, 40 kHz deviation (100%)*
Mode:	*MONO*

1. Tune the set to 98 MHz.
2. Adjust IFT101 for a minimum reading on the distortion meter.

IFT101

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
87.1 MHz	L001
109.5 MHz	CT001

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
109.5 MHz	CT002
87.1 MHz	L003



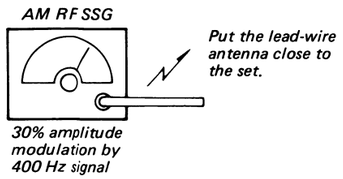
FH-3 ST-38

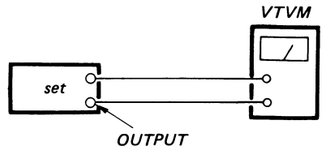
MW

- **Setting:**

  BAND Switch: MW

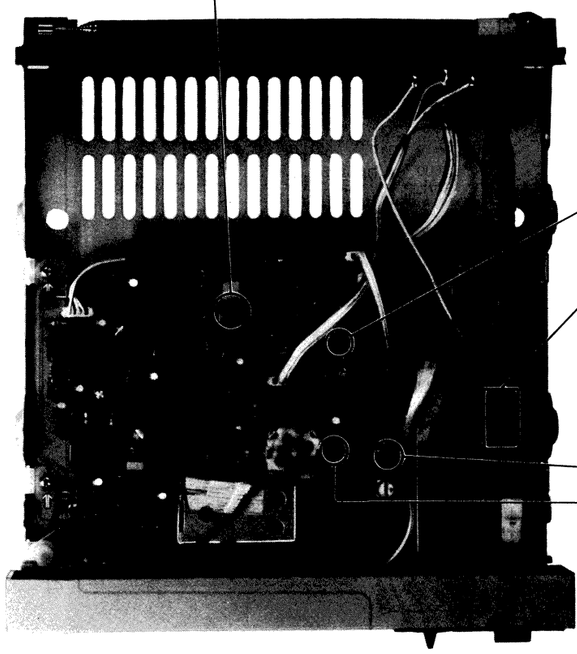
- **Procedure:**





- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ALIGNMENT	
Adjust for a maximum reading on VTVM.	
IFT051	1,000 kHz



MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT051	1,400 kHz
L051-1	600 kHz

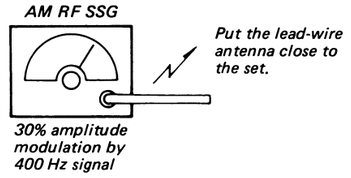
MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L054	515 kHz
CT054	1,660 kHz

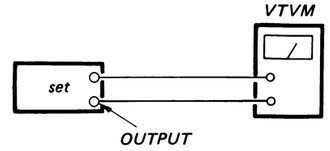
LW

- **Setting:**

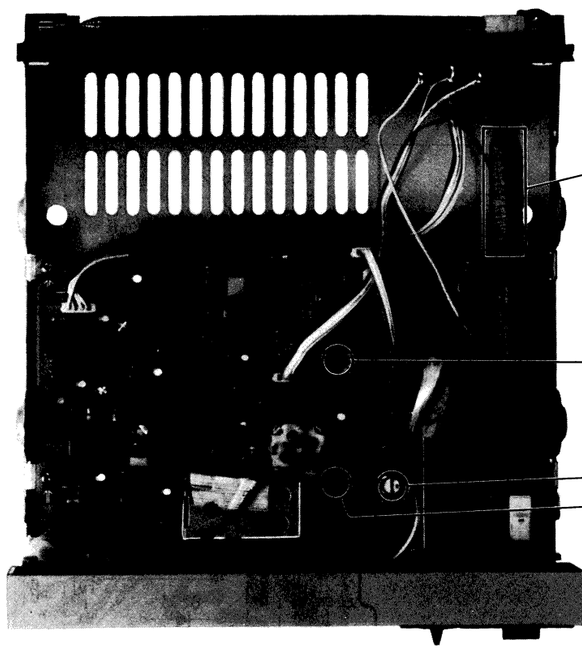
  BAND Switch: LW

- **Procedure:**





- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



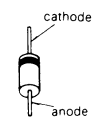
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L051-2	170 kHz
CT052	310 kHz

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L055	145 kHz
CT055	365 kHz

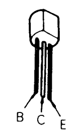
SECTION 4 DIAGRAMS

- **Semiconductor Lead Layouts**

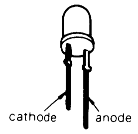
1SS202-1
RD6.8E-N3
EQA01-05R



2SC710-14

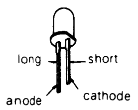


SLR-54MC3
SLH-54VC3

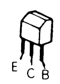


2SC2458

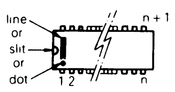
BG5628S



2SD774



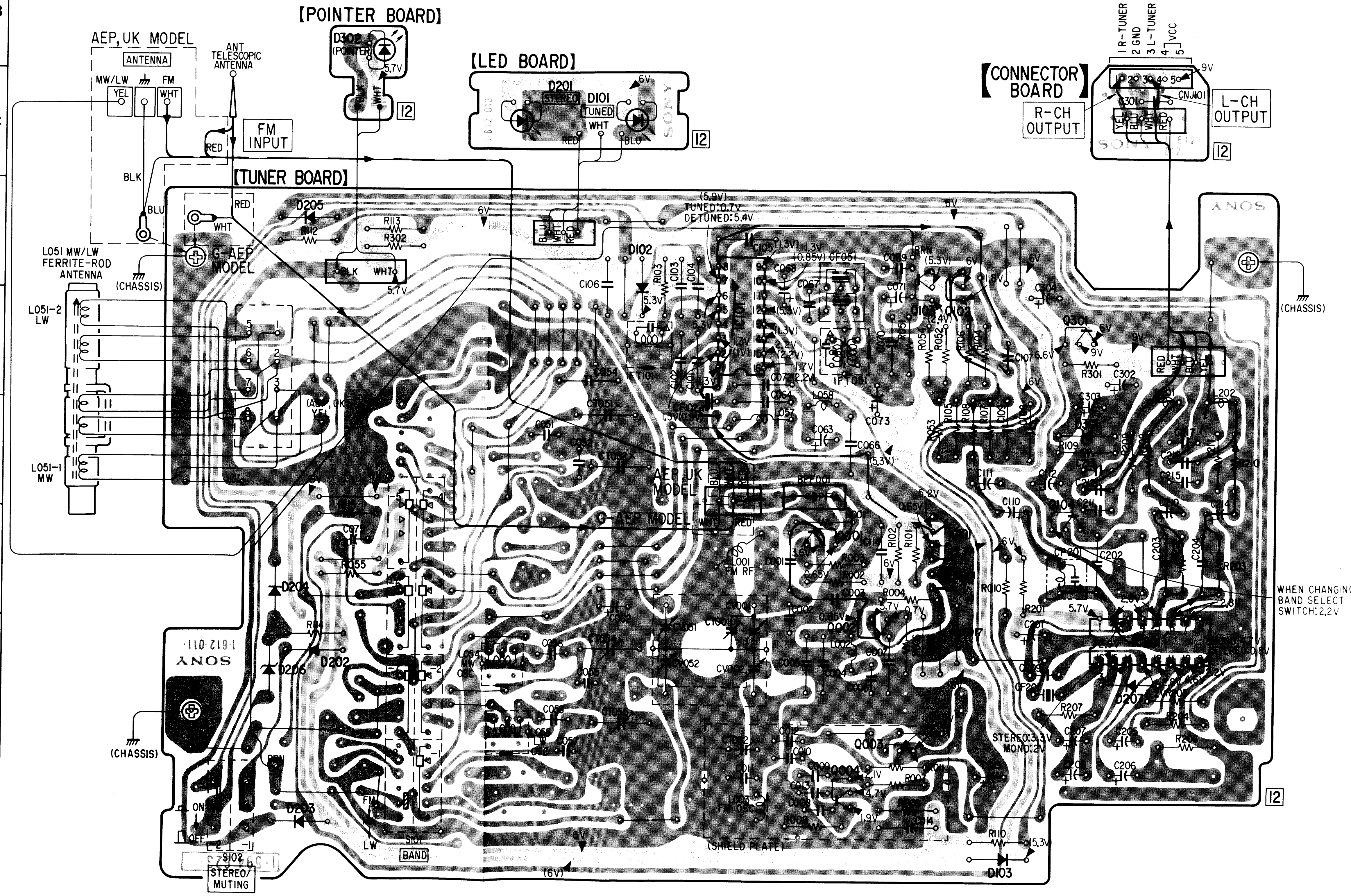
LA1260C
LA3410



(Top view)

4-1. MOUNTING DIAGRAM

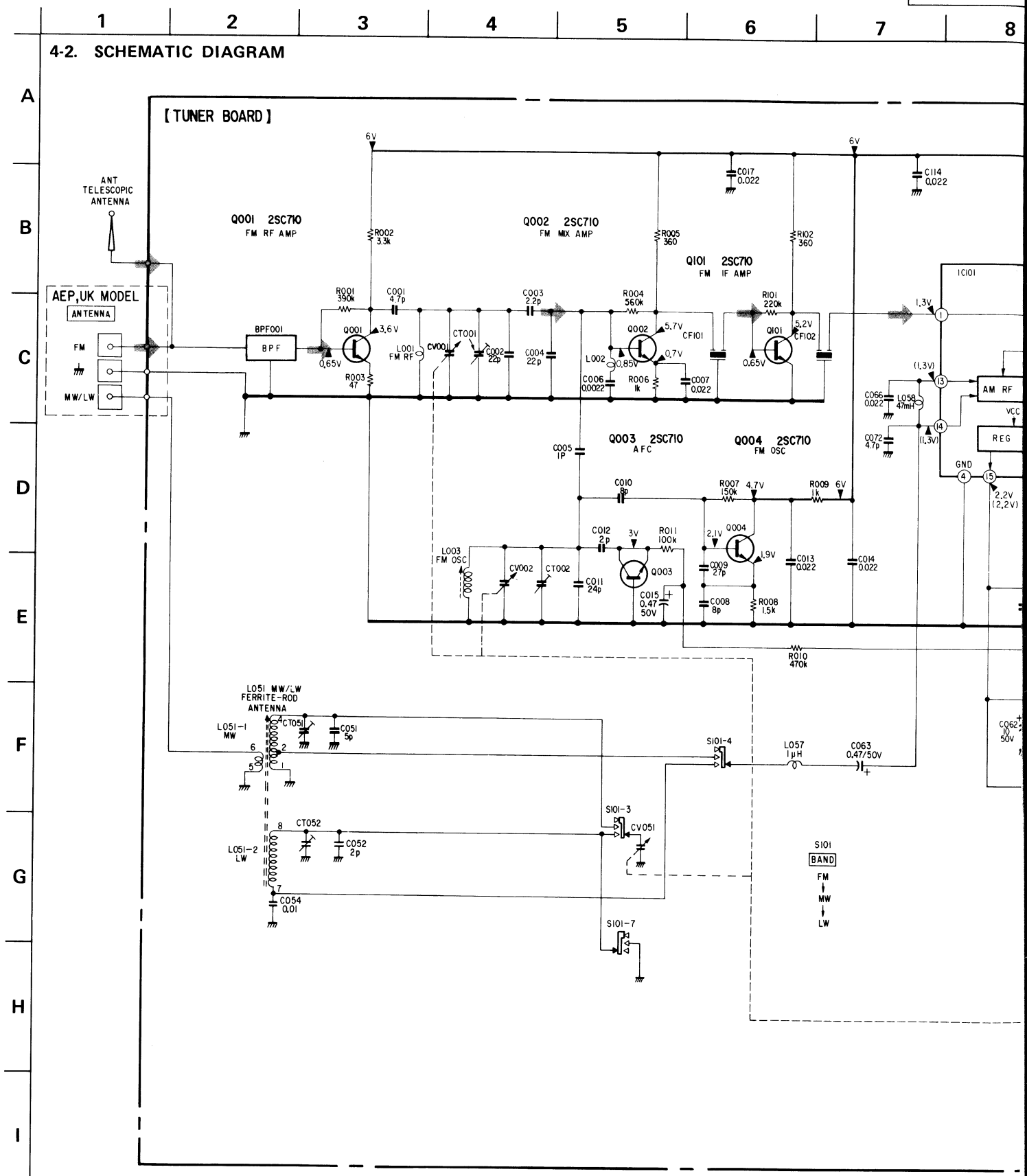
	1	2	3	4	5	6	7	8	9	10	11	12
Q · IC							IC101	001 004	002 103 102 003 101	301 104	IC201	
D			204 205 206 202 203	302	201	101 102				103 301	207	

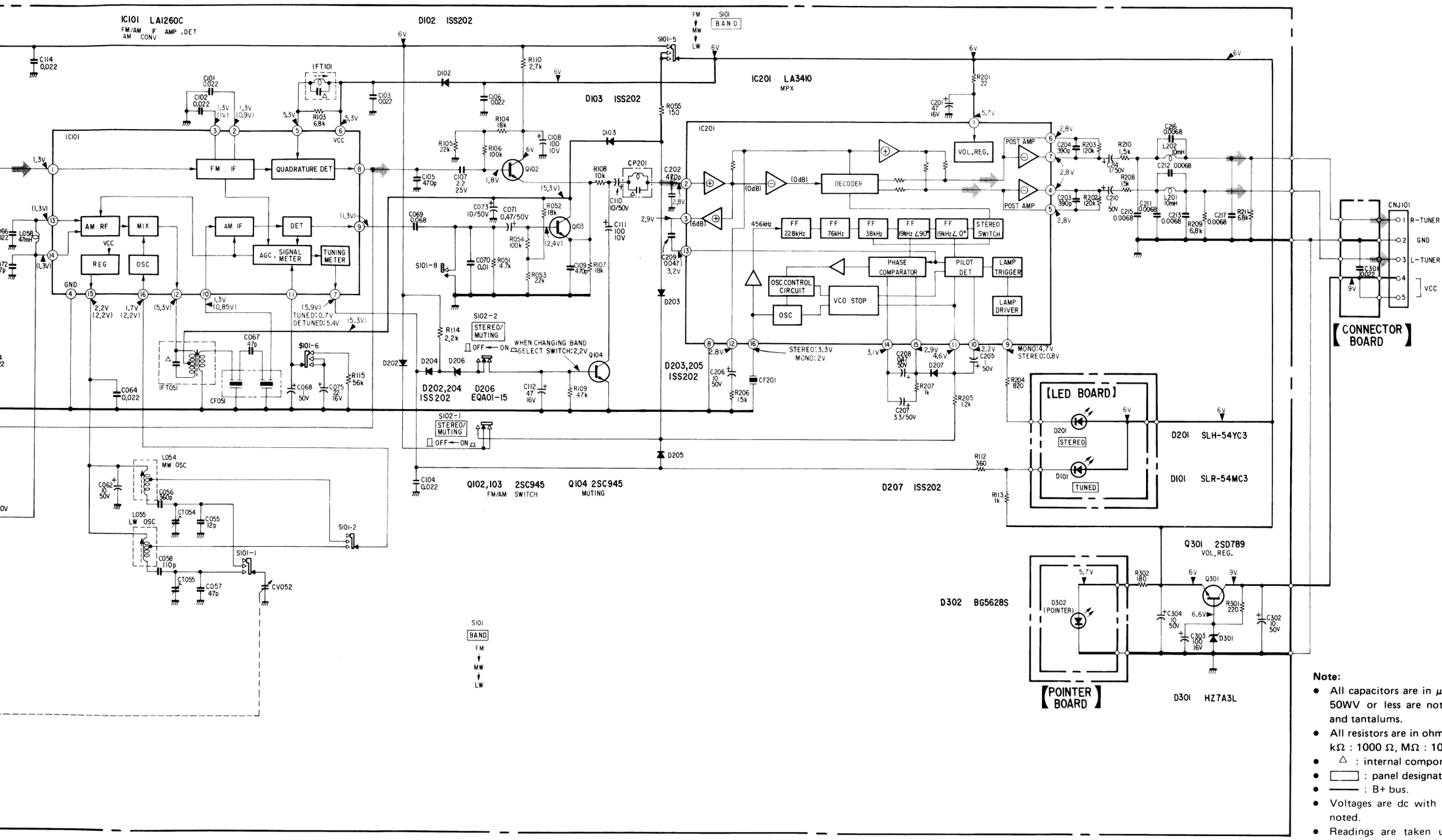

A
B
C
D
E
F
G
H
I
J
AEP, UK MODEL
ANTENNA
MW/LW
FM
YEL
WHT
BLK
BLU
RED
ANT TELESCOPIC ANTENNA
FM INPUT
【POINTER BOARD】
D302 (POINTER)
5.7V
BLK
WHT
12
【LED BOARD】
D201 STEREO
D101 TUNED
6V
WHT
RED
BLU
12
【CONNECTOR BOARD】
1 R-TUNER
2 GND
3 L-TUNER
4 VCC
5
9V
CNJ101
C301
R-CH OUTPUT
L-CH OUTPUT
YEL BLU WHT RED
12
【TUNER BOARD】
L051 MW/LW FERRITE-ROD ANTENNA
L051-2 LW
L051-1 MW
(CHASSIS)
G-AEP MODEL
D205
R112
R113
R302
6V
(5.9V)
TUNED: 0.7V
DETUNED: 5.4V
D102
R103
C103
C104
C106
C105
IC101
CF051
C068
C067
C069
C071
Q103
Q102
Q301
R301
C302
C303
C304
C107
IFT101
IFT051
C054
CT051
CT052
C051
C052
C062
C064
C072
L057
L058
C063
C066
C073
AEP, UK MODEL
G-AEP MODEL
BPF001
L001 FM RF
C001
Q001
Q002
Q003
Q004
R001
R002
R003
R004
R007
R008
C002
C003
C004
C005
C006
C007
C008
C009
C010
C011
C012
C013
C014
CV001
CV002
CV051
CV052
CT001
CT002
L002
L003 FM OSC
L054 MW OSC
L055 LW OSC
C055
C056
C057
C058
CT054
CT055
(SHIELD PLATE)
R101
R102
R104
R105
R106
R107
R108
R109
R110
C110
C111
C112
C114
Q104
R201
R203
R204
R205
R206
R207
R210
C201
C202
C203
C204
C205
C206
C207
C208
C209
C210
C211
C212
C213
C214
C215
C217
CF201
L201
L202
D207
D103
(5.3V)
STEREO: 3.3V
MONO: 2V
WHEN CHANGING BAND SELECT SWITCH: 2.2V
D204
D206
D202
D203
R114
RC055
C075
S101 BAND
FM
LW
S102 STEREO/MUTING
ON
OFF
(6V)
SONY
1-612-011-
12

Note:

- ○— : parts extracted from the component side.
- [ ]⊢ : indicates side identified with part number.
- : B + pattern
- ▬▬▶▬ : signal path
- ▬▬▪▬▶ : L-CH signal path
- ▬▬▪▪▬▶ : R-CH signal path

4-2. SCHEMATIC DIAGRAM

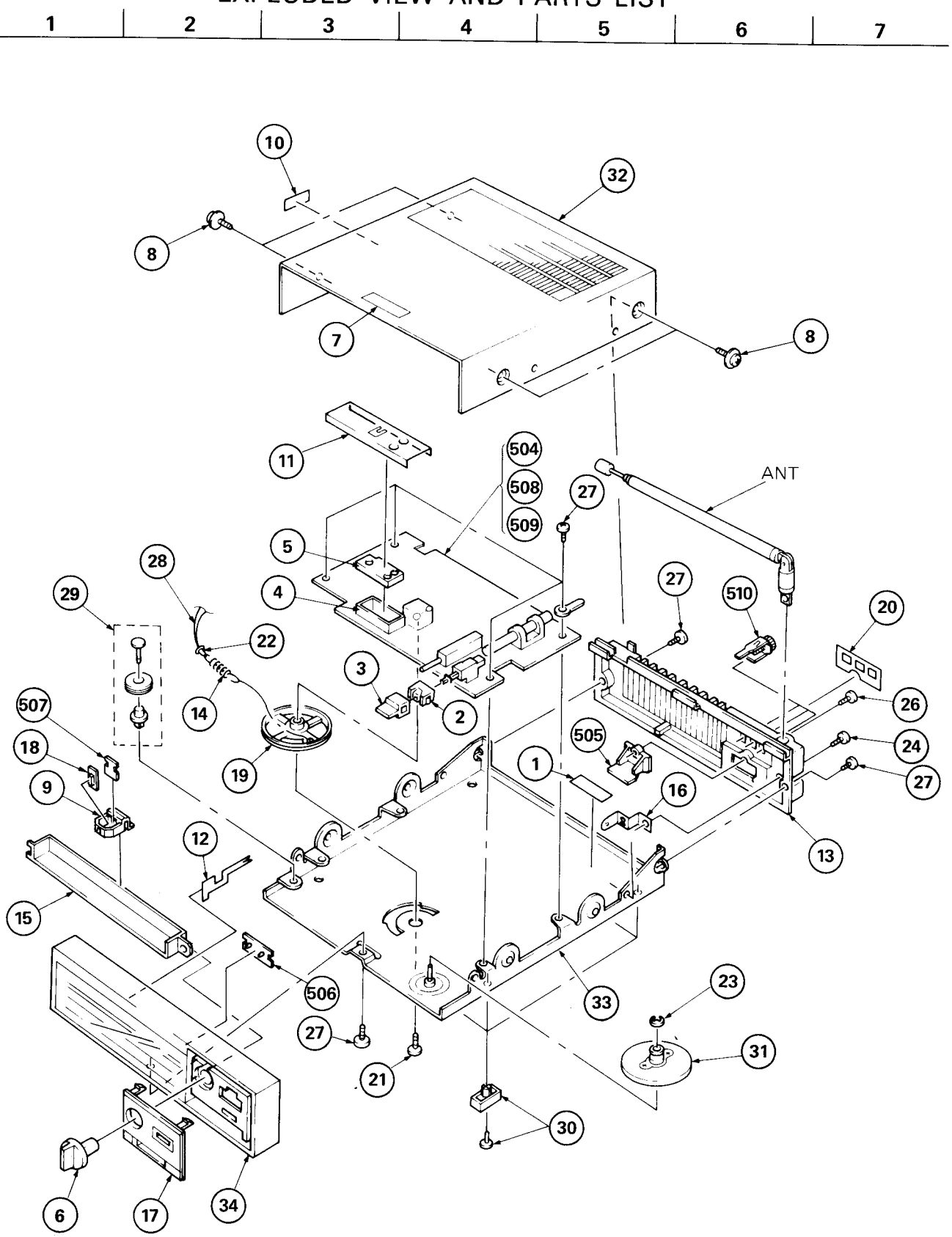




Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- △ : internal component.
- ▭ : panel designation.
- ——— : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  no mark: FM
  ( ) : AM
- Voltage variations may be noted due to normal production tolerances.
- ⇒ : signal path

SECTION 5
EXPLODED VIEW AND PARTS LIST



GENERAL SECTION

No.	Part No.	Description
1	3-701-030-00	LABEL, SERIAL NUMBER
2	4-864-307-00	RING
3	4-880-321-11	(SILVER,BLACK)...KNOB (3X14), SQUARE
3	4-880-321-21	(RED).....KNOB (3X14), SQUARE
4 ♦	4-880-329-00	PLATE (E), SHIELD
5 ♦	4-880-330-00	PLATE (F), SHIELD
6	4-884-847-00	(RED).....KNOB (ST), ROTARY SWITCH
6	4-884-847-11	(SILVER,BLACK)...KNOB (ST), ROTARY SWITCH
7	4-884-927-00	LABEL (SYSTEM), CAUTION
8	4-886-821-21	(BLACK).....SCREW, M3 CASE STOPPER
8	4-886-821-31	(SILVER,RED)...SCREW, M3 CASE STOPPER
9 ♦	4-889-622-01	INDICATOR
10	4-902-915-01	(AEP,UK)...LABEL, MODEL NUMBER
10	4-902-916-01	(G-AEP)....LABEL, MODEL NUMBER
11 ♦	4-902-920-01	COVER, EDGE
12 ♦	4-902-921-01	HOLDER, LEAD WIRE
13	4-902-922-01	PLATE, JACK
14	4-902-929-01	SPRING, EXTENSION
15 ♦	4-902-933-01	RAIL, POINTER
16 ♦	4-902-935-01	TERMINAL BOARD
17	4-902-936-31	(RED).....PANEL, CONTROL
17	4-902-936-11	(SILVER,BLACK)...PANEL, CONTROL
18 ♦	4-902-937-01	TABLE, POINTER
19 ♦	4-902-938-01	DRUM, DIAL
20	4-905-301-01	(AEP,UK)...LABEL, ANTENNA
20	4-905-302-01	(G-AEP)....LABEL, ANTENNA
21	7-621-775-10	SCREW +B 2.6X4
22	7-623-616-01	EYELET, 2X3
23	7-624-105-04	STOP RING 2.3, TYPE -E
24	7-682-548-09	SCREW +B 3X8
25	.....	
26	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
27	7-685-871-01	SCREW +BVTT 3X6 (S)
28	9-911-825-42	STRING, 0.5MM WHITE
29	X-4856-325-0	PULLEY ASSY
30	X-4884-801-0	FOOT ASSY, RUBBER
31	X-4902-902-1	(SILVER,RED)...KNOB ASSY, TG
31	X-4902-910-1	(BLACK).....KNOB ASSY, TG
32	X-4902-903-1	(RED).....CASE ASSY
32	X-4902-904-1	(BLACK)....CASE ASSY
32	X-4902-905-1	(SILVER)...CASE ASSY
33 ♦	X-4902-906-1	CHASSIS ASSY

GENERAL SECTION

No.	Part No.	Description
34	X-4902-930-1	(AEP,UK:SILVER)...PANEL ASSY
34	X-4902-930-2	(AEP,UK:BLACK)....PANEL ASSY
34	X-4902-930-3	(AEP,UK:RED).....PANEL ASSY
34	X-4902-931-1	(G-AEP:SILVER)....PANEL ASSY
34	X-4902-931-2	(G-AEP:BLACK).....PANEL ASSY
34	X-4902-931-3	(G-AEP:RED).....PANEL ASSY

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501 ♦	1-535-139-00	BASE POST 19MM (10MM PITCH) 2P			
502 ♦	1-562-249-00	SOCKET, CONNECTOR 4P			
503 ♦	1-562-327-00	SOCKET, CONNECTOR 3P			
504 ♦	1-612-011-11	PC BOARD, TUNER			
505 ♦	1-612-012-11	PC BOARD, CONNECTOR			
506 ♦	1-612-013-11	PC BOARD, LED			
507 ♦	1-612-014-11	PC BOARD, POINTER			
508 ♦	A-4351-391-A	(AEP,UK)...MOUNTED PCB, TUNER			
509 ♦	A-4351-392-A	(G-AEP)....MOUNTED PCB, TUNER			
510	1-536-742-00	TERMINAL BOARD, ANTENNA			
ANT	1-501-270-00	ANTENNA, TELESCOPIC			
BPF001	1-231-720-00	FILTER, BANDPASS			
C001	1-161-255-00	CERAMIC	4.7PF	10%	50V
C002	1-102-959-00	CERAMIC	22PF	5%	50V
C003	1-161-251-00	CERAMIC	2.2PF	10%	50V
C004	1-161-263-00	CERAMIC	22PF	5%	50V
C005	1-161-247-00	CERAMIC	1PF	20%	50V
C006	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C007	1-161-494-00	CERAMIC	0.022MF	30%	25V
C008	1-102-684-00	CERAMIC	8PF	0.5PF	50V
C009	1-102-806-00	CERAMIC	27PF	5%	50V
C010	1-102-684-00	CERAMIC	8PF	0.5PF	50V
C011	1-102-672-00	CERAMIC	24PF	5%	50V
C012	1-102-935-00	CERAMIC	2PF	0.25PF	50V
C013	1-101-005-00	CERAMIC	0.022MF		50V
C014	1-161-494-00	CERAMIC	0.022MF	30%	25V
C015	1-123-379-00	ELECT	0.47MF	20%	50V
C017	1-161-494-00	CERAMIC	0.022MF	30%	25V
C051	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C052	1-102-935-00	CERAMIC	2PF	0.25PF	50V
C054	1-161-321-00	CERAMIC	680PF	30%	25V
C055	1-102-262-00	CERAMIC	12PF	5%	50V
C056	1-104-066-00	POLYSTYRENE	360PF	5%	50V
C057	1-102-852-00	CERAMIC	47PF	5%	50V
C058	1-103-701-00	POLYSTYRENE	100PF	5%	50V
C062	1-123-356-00	ELECT	10MF	20%	50V
C063	1-123-379-00	ELECT	0.47MF	20%	50V
C064	1-161-494-00	CERAMIC	0.022MF	30%	25V
C066	1-161-494-00	CERAMIC	0.022MF	30%	25V
C067	1-101-880-00	CERAMIC	47PF	5%	50V
C068	1-123-380-00	ELECT	1MF	20%	50V
C069	1-130-630-00	MYLAR	0.068MF	10%	50V
C070	1-161-330-00	CERAMIC	0.01MF	30%	25V
C071	1-123-379-00	ELECT	0.47MF	20%	50V
C072	1-161-255-00	CERAMIC	4.7PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C073	1-123-356-00	ELECT	10MF	20%	50V
C075	1-123-330-00	ELECT	22MF	20%	16V
C101	1-161-494-00	CERAMIC	0.022MF	30%	25V
C102	1-161-494-00	CERAMIC	0.022MF	30%	25V
C103	1-161-494-00	CERAMIC	0.022MF	30%	25V
C104	1-161-494-00	CERAMIC	0.022MF	30%	25V
C105	1-161-319-00	CERAMIC	470PF	10%	50V
C106	1-161-494-00	CERAMIC	0.022MF	30%	25V
C107	1-124-183-00	ELECT	2.2MF	20%	25V
C108	1-123-307-00	ELECT	100MF	20%	10V
C109	1-161-319-00	CERAMIC	470PF	10%	50V
C110	1-123-356-00	ELECT	10MF	20%	50V
C111	1-123-307-00	ELECT	100MF	20%	10V
C112	1-123-332-00	ELECT	47MF	20%	16V
C114	1-161-494-00	CERAMIC	0.022MF	30%	25V
C201	1-123-332-00	ELECT	47MF	20%	16V
C202	1-161-319-00	CERAMIC	470PF	10%	50V
C203	1-161-318-00	CERAMIC	390PF	10%	50V
C204	1-161-318-00	CERAMIC	390PF	10%	50V
C205	1-123-380-00	ELECT	1MF	20%	50V
C206	1-123-356-00	ELECT	10MF	20%	50V
C207	1-123-382-00	ELECT	3.3MF	20%	50V
C208	1-123-379-00	ELECT	0.47MF	20%	50V
C209	1-130-491-00	MYLAR	0.047MF	5%	50V
C210	1-123-380-00	ELECT	1MF	20%	50V
C211	1-130-481-00	MYLAR	0.0068MF	5%	50V
C212	1-130-481-00	MYLAR	0.0068MF	5%	50V
C213	1-130-481-00	MYLAR	0.0068MF	5%	50V
C214	1-123-380-00	ELECT	1MF	20%	50V
C215	1-130-481-00	MYLAR	0.0068MF	5%	50V
C216	1-130-481-00	MYLAR	0.0068MF	5%	50V
C217	1-130-481-00	MYLAR	0.0068MF	5%	50V
C301	1-101-005-00	CERAMIC	0.022MF		50V
C302	1-123-356-00	ELECT	10MF	20%	50V
C303	1-123-333-00	ELECT	100MF	20%	16V
C304	1-123-356-00	ELECT	10MF	20%	50V
CF051	1-527-937-00	FILTER, CERAMIC			
CF101	1-527-964-00	FILTER, CERAMIC			
CF102	1-527-964-00	FILTER, CERAMIC			
CF201	1-567-250-11	OSCILLATOR, CERAMIC			
CNJ101	1-562-067-00	SOCKET, CONNECTOR 5P			
CP201	1-235-046-00	ENCAPSULATED COMPONENT (B.E.F)			

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CAPACITORS:
- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description
CT001	1-151-440-00	CAP, TUNING, POLYETHYLENE
CT002	1-141-263-11	CAP, TRIMMER
CT051	1-141-179-12	CAP, TRIMMER
CT052	1-141-179-12	CAP, TRIMMER
CT054	1-141-179-12	CAP, TRIMMER
CT055	1-141-179-12	CAP, TRIMMER
CV001	1-151-440-00	CAP, TUNING, POLYETHYLENE
CV002	1-151-440-00	CAP, TUNING, POLYETHYLENE
CV051	1-151-440-00	CAP, TUNING, POLYETHYLENE
CV052	1-151-440-00	CAP, TUNING, POLYETHYLENE
D101	8-719-908-50	DIODE SLR-54MC3
D102	8-719-107-94	DIODE 1SS202-1
D103	8-719-107-94	DIODE 1SS202-1
D201	8-719-904-08	DIODE SLH-54VC3
D202	8-719-107-94	DIODE 1SS202-1
D203	8-719-107-94	DIODE 1SS202-1
D204	8-719-107-94	DIODE 1SS202-1
D205	8-719-107-94	DIODE 1SS202-1
D206	8-719-936-05	DIODE EQA01-05R
D207	8-719-107-94	DIODE 1SS202-1
D301	8-719-102-79	DIODE RD6.8E-N3
D302	8-719-900-79	DIODE BG5628S
IC101	8-759-801-37	IC LA1260C
IC201	8-759-800-90	IC LA3410
IFT051	1-404-413-00	TRANSFORMER, IF
IFT101	1-404-534-11	TRANSFORMER, IF
L001 ♦	1-420-884-00	COIL, AIR CORE
L002 ♦	1-420-840-00	COIL
L003	1-459-412-00	COIL (WITH CORE)
L051	1-402-094-11	ANTENNA, FERRITE-ROD (LW/MW)
L052	1-402-094-11	ANTENNA, FERRITE-ROD (LW/MW)
L054	1-406-065-00	COIL (OSC)
L055	1-405-921-00	COIL, OSCILLATOR
L058	1-408-224-00	MICRO INDUCTOR 47MMH
L201	1-408-257-00	MICRO INDUCTOR 10MMH
L202	1-408-257-00	MICRO INDUCTOR 10MMH
Q001	8-729-671-14	TRANSISTOR 2SC710-14
Q002	8-729-671-14	TRANSISTOR 2SC710-14
Q003	8-729-671-14	TRANSISTOR 2SC710-14
Q004	8-729-671-14	TRANSISTOR 2SC710-14
Q101	8-729-671-14	TRANSISTOR 2SC710-14
Q102	8-729-245-83	TRANSISTOR 2SC2458
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q104	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-177-43	TRANSISTOR 2SD774

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R001	1-246-535-00	CARBON	390K	5%	1/4W
R002	1-246-485-00	CARBON	3.3K	5%	1/4W
R003	1-247-099-00	CARBON	47	5%	1/4W
R004	1-246-539-00	CARBON	560K	5%	1/4W
R005	1-246-462-00	CARBON	360	5%	1/4W
R006	1-247-131-00	CARBON	1K	5%	1/4W
R007	1-246-525-00	CARBON	150K	5%	1/4W
R008	1-247-135-00	CARBON	1.5K	5%	1/4W
R009	1-246-483-00	CARBON	2.7K	5%	1/4W
R010	1-246-537-00	CARBON	470K	5%	1/4W
R011	1-247-179-00	CARBON	100K	5%	1/4W
R051	1-247-147-00	CARBON	4.7K	5%	1/4W
R052	1-247-161-00	CARBON	18K	5%	1/4W
R053	1-246-505-00	CARBON	22K	5%	1/4W
R054	1-247-179-00	CARBON	100K	5%	1/4W
R055	1-247-811-00	CARBON	150	5%	1/4W
R101	1-246-529-00	CARBON	220K	5%	1/4W
R102	1-246-462-00	CARBON	360	5%	1/4W
R103	1-247-151-00	CARBON	6.8K	5%	1/4W
R104	1-247-161-00	CARBON	18K	5%	1/4W
R105	1-246-505-00	CARBON	22K	5%	1/4W
R106	1-247-179-00	CARBON	100K	5%	1/4W
R107	1-247-161-00	CARBON	18K	5%	1/4W
R108	1-247-155-00	CARBON	10K	5%	1/4W
R109	1-247-171-00	CARBON	47K	5%	1/4W
R110	1-246-483-00	CARBON	2.7K	5%	1/4W
R112	1-246-462-00	CARBON	360	5%	1/4W
R113	1-247-131-00	CARBON	1K	5%	1/4W
R114	1-247-139-00	CARBON	2.2K	5%	1/4W
R115	1-247-173-00	CARBON	56K	5%	1/4W
R201	1-246-433-00	CARBON	22	5%	1/4W
R202	1-246-523-00	CARBON	120K	5%	1/4W
R203	1-246-523-00	CARBON	120K	5%	1/4W
R204	1-246-471-00	CARBON	820	5%	1/4W
R205	1-247-133-00	CARBON	1.2K	5%	1/4W
R206	1-247-159-00	CARBON	15K	5%	1/4W
R207	1-247-131-00	CARBON	1K	5%	1/4W
R208	1-247-135-00	CARBON	1.5K	5%	1/4W
R209	1-247-151-00	CARBON	6.8K	5%	1/4W
R210	1-247-135-00	CARBON	1.5K	5%	1/4W
R211	1-247-151-00	CARBON	6.8K	5%	1/4W
R301	1-247-115-00	CARBON	220	5%	1/4W
R302	1-246-455-00	CARBON	180	5%	1/4W
S101	1-554-759-11	SWITCH, ROTARY SLIDE (BAND)			
S102	1-554-428-00	SWITCH, PUSH (1 KEY)(STEREO/MUTING)			

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

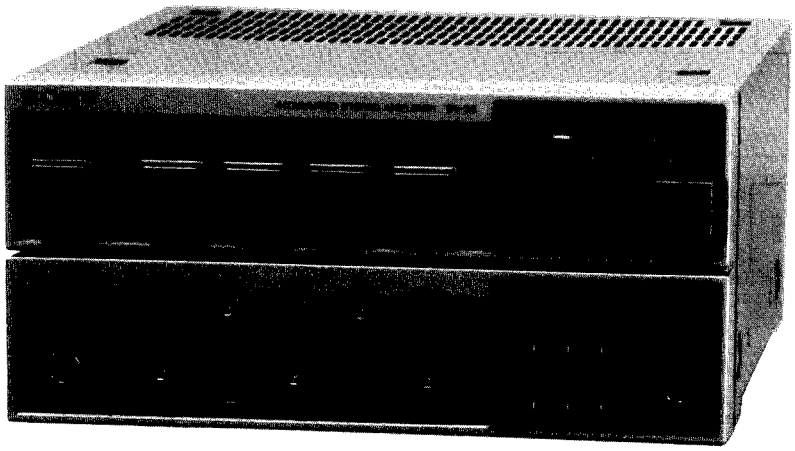
COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

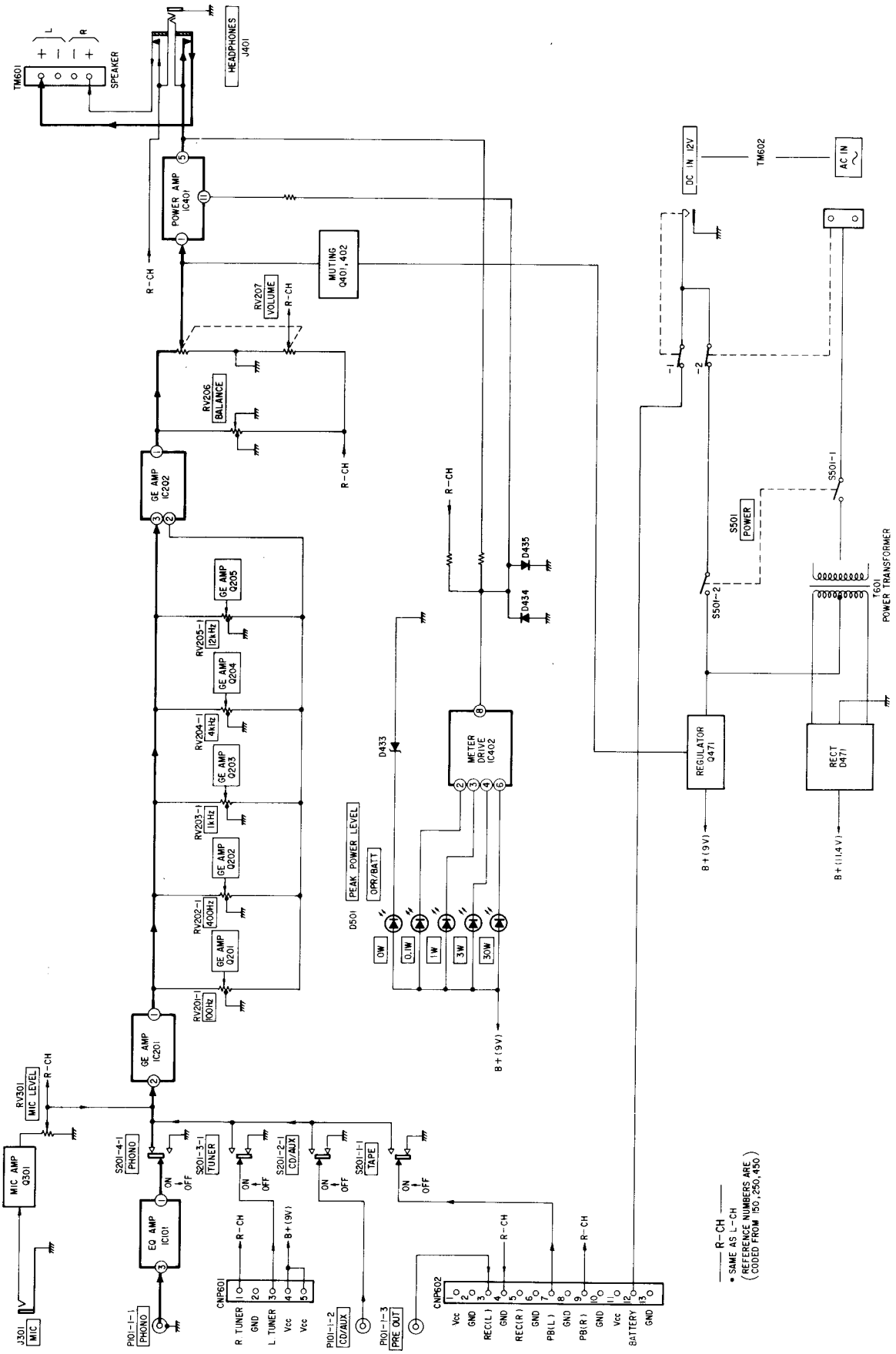
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

INTEGRATED STEREO AMPLIFIER
(TA-38)



Note: TA-38 is an integrated stereo amplifier in FH-3.

SECTION 1
BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

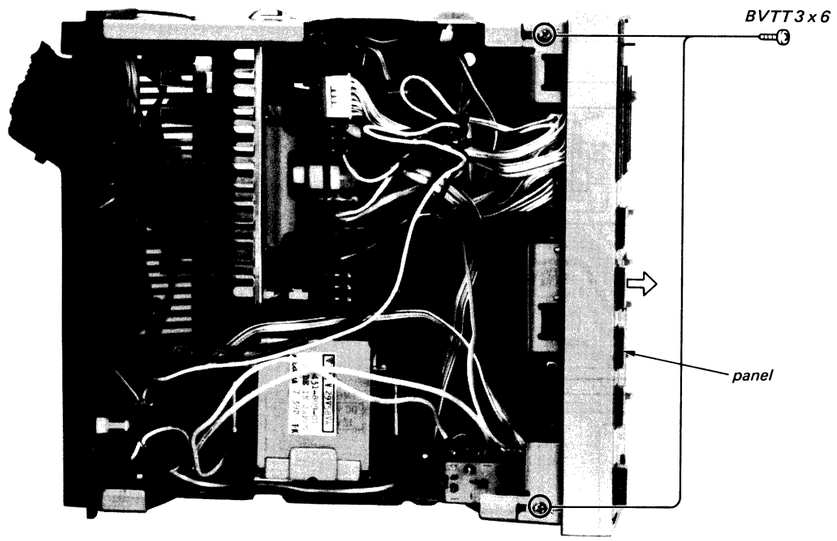
2-1. DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

CASE

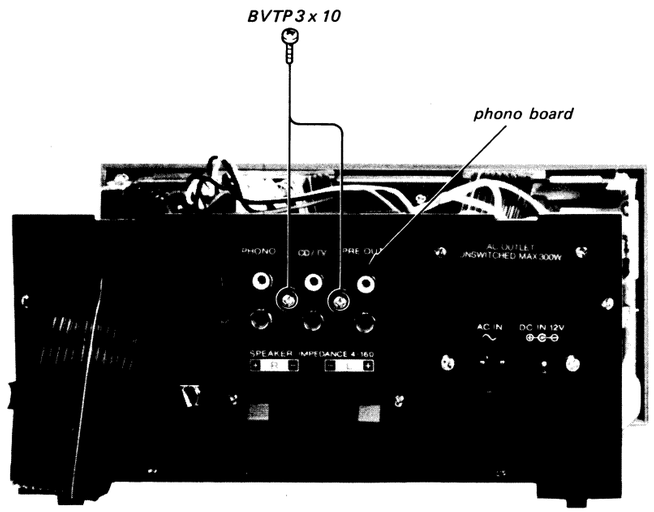
Remove four case screws.

PANEL

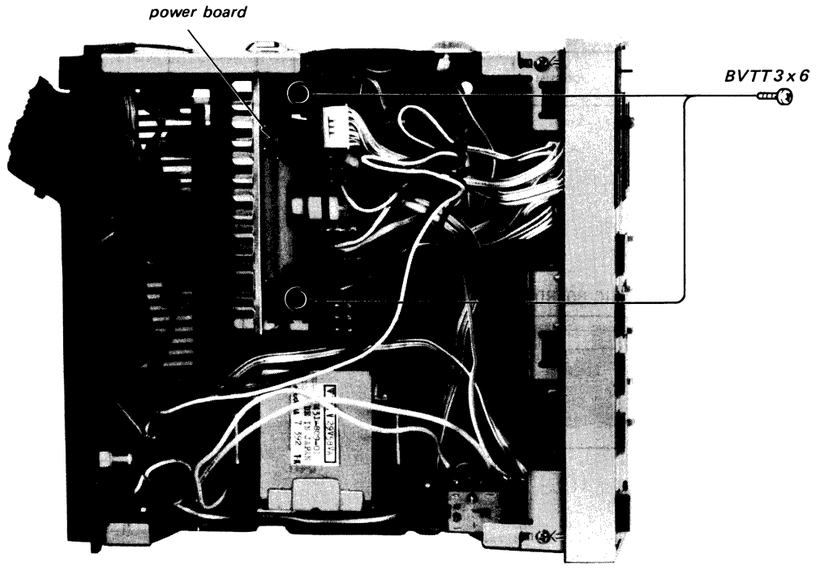


GRAPHIC EQUALIZER BOARD

PHONO BOARD



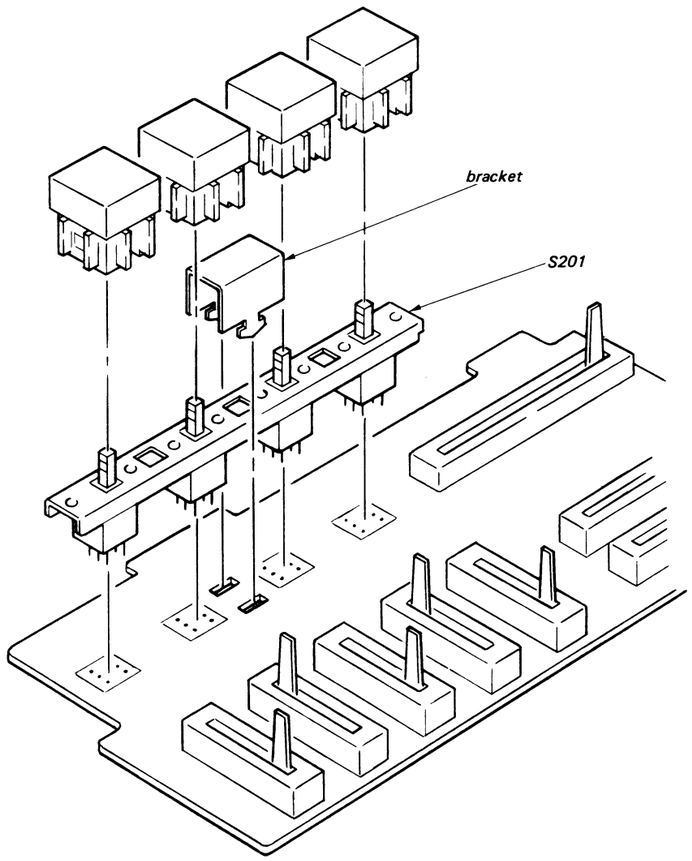
POWER BOARD



2-2. ASSEMBLY

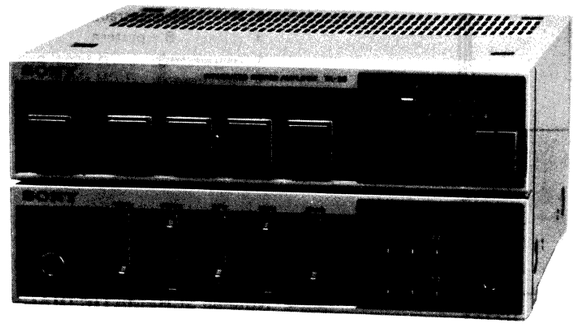
FUNCTION SWITCH

Be sure to install the bracket to prevent the function switch (S201) from breakdown caused by electrostatic discharge.

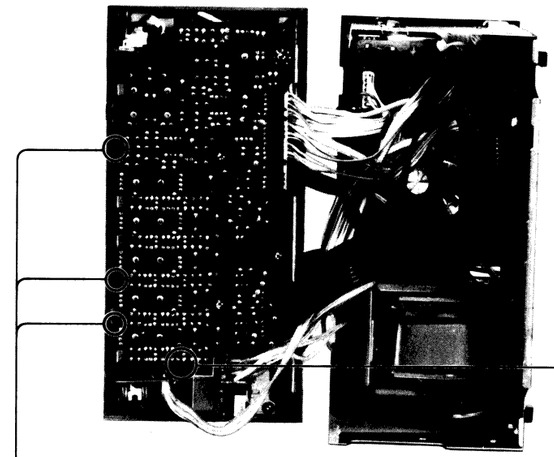


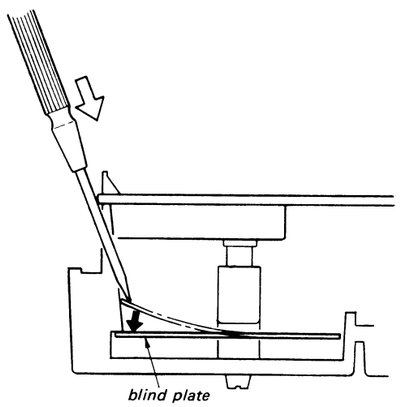
GRAPHIC EQUALIZER BOARD

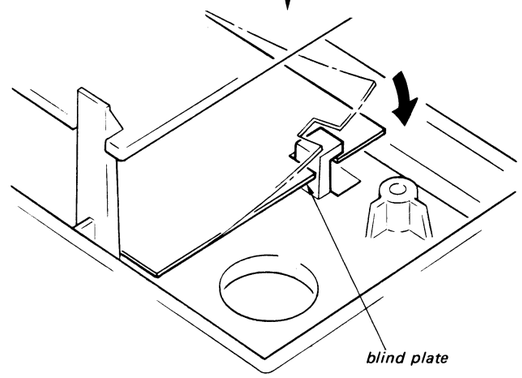
① Set the each knob as shown below.



② Push the blind plate to set it under the claws with a screwdriver.



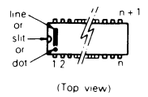




SECTION 3
DIAGRAMS

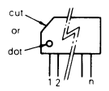
• Semiconductor Lead Layouts

μPC4558C

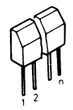


(Top view)

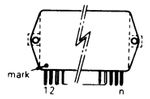
LB1413



M5218L

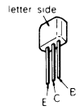


STK4311



(Marking side view)

2SA1175

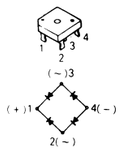


2SC2458

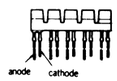
2SD1406

HZ3A1
HZ6A1L
1T-22
HZ11A1L

RB402



SLP252B-06



• Note on MOUNTING DIAGRAM

Note:

- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ▒ : B + pattern
- ▬▬▶ : L-CH signal path
- ▬▬▶ : R-CH signal path

• Note on SCHEMATIC DIAGRAM

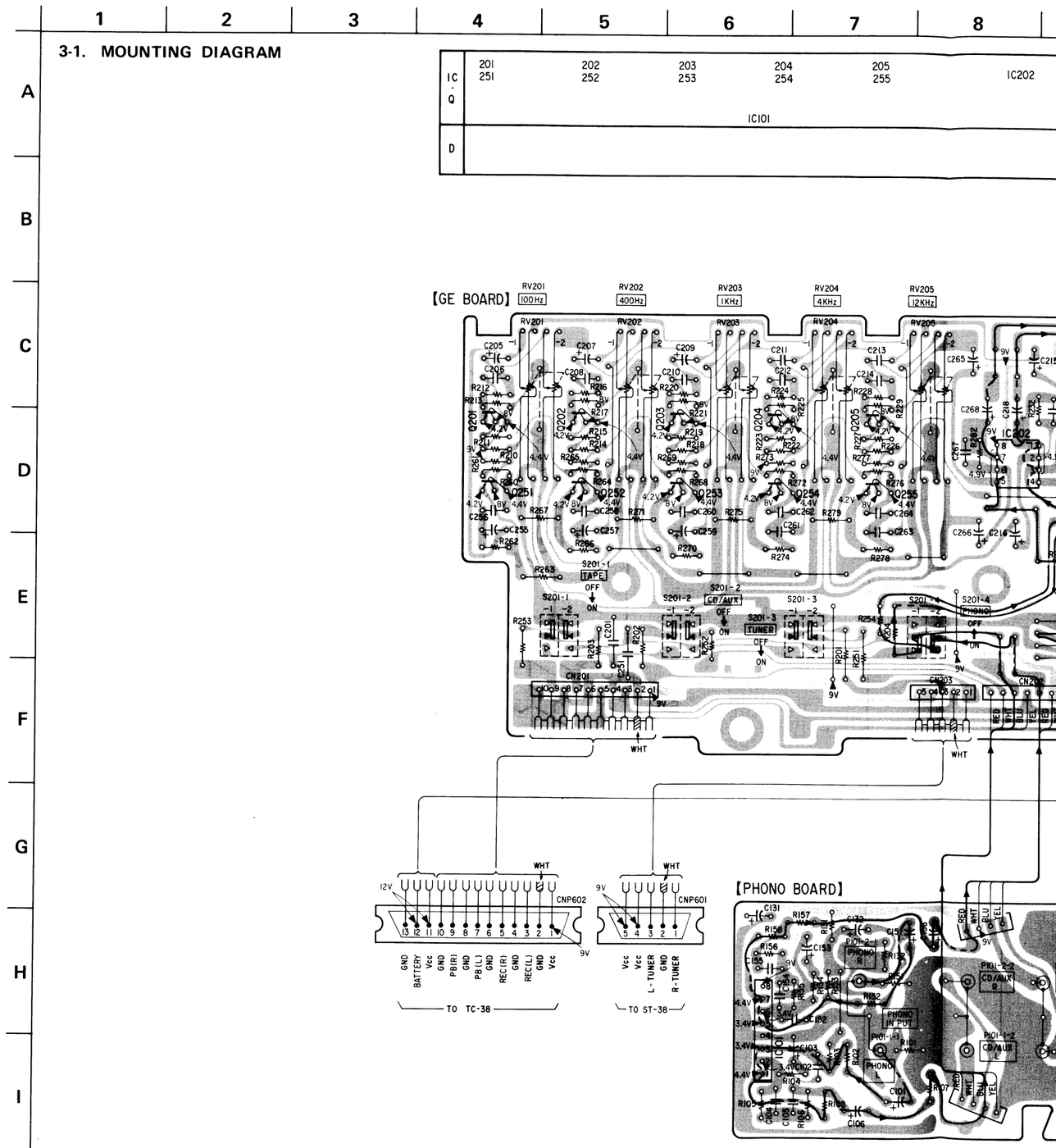
Note:

- Components for right channel have same values as for left channel. Reference numbers are coded from 150, 250, 450.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/6 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- ——— : B+ bus.
- Voltages are dc with respect to ground unless noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
- Voltage variations may be noted due to normal production tolerances.
- Switches

Ref. No.	Switch	Position
S201-1	TAPE	OFF
S201-2	CD/AUX	OFF
S201-3	TUNER	OFF
S201-4	PHONO	ON
S501	POWER	OFF
S601	VOLTAGE SELECTOR	110 – 120V

- ⟹ : signal path

3-1. MOUNTING DIAGRAM



8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

IC202 IC201 301 IC401 471 472 501 431 471 435 434 433 402 452, 401, 451 IC402 — IC · Q / D

A B C D E F G H I J

【POWER IC BOARD】

【POWER BOARD】

【AC/DC BOARD】 US,CND,E MODEL

【MIC BOARD】

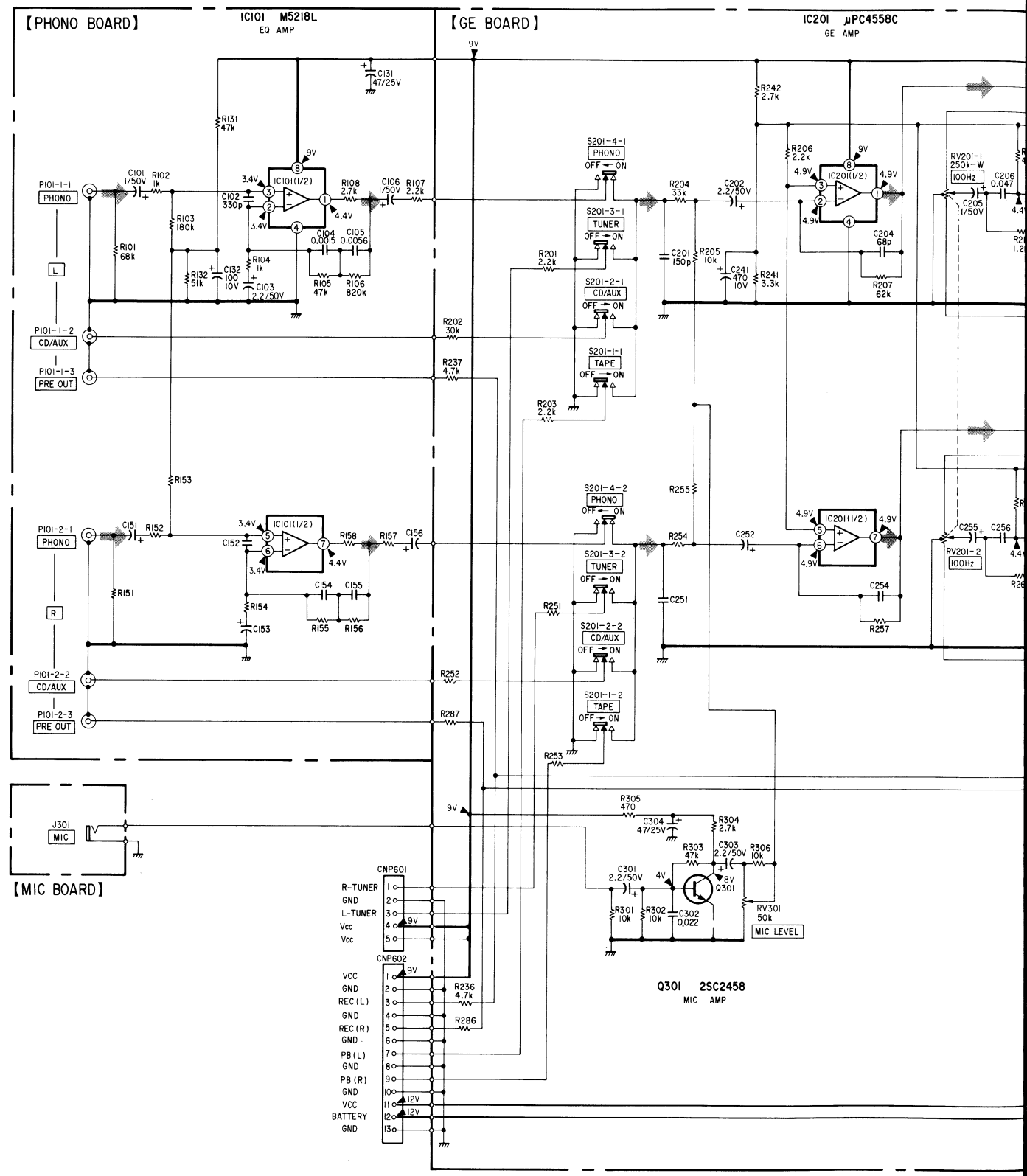
【LED METER BOARD】

【HEADPHONE BOARD】

【POWER SWITCH BOARD】

【AC/DC BOARD】 AEP, UK MODEL

3-2. SCHEMATIC DIAGRAM • Refer to page TA-7 for notes.



Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

A B C D E F G H I J

C4558C

Q201~205, 251~255 2SC2458
GE AMP

IC202 μPC4558C
DRIVE AMP

Q401, 451 2SC2458
Q402, 452 2SA1175
MUTING

D431 HZ3AI

【POWER BOARD】

【HEADPHONE BOARD】

IC401 STK4311
POWER AMP

【POWER IC BOARD】

【LED METER BOARD】

D501
SLP252B-06 D501

PEAK POWER LEVEL
OPR/BATT 0W 0.1W 1W 3W 30W

IC402

D433 HZ6AIL

IC402 LB1413
METER DRIVE

D434, 435 IT-22

D471 RB402
RECT

Q471 2SD1406
REGULATOR

D472 HZIIAIL

US, CND, E MODEL
【AC/DC BOARD(1/2)】
US, CND MODEL

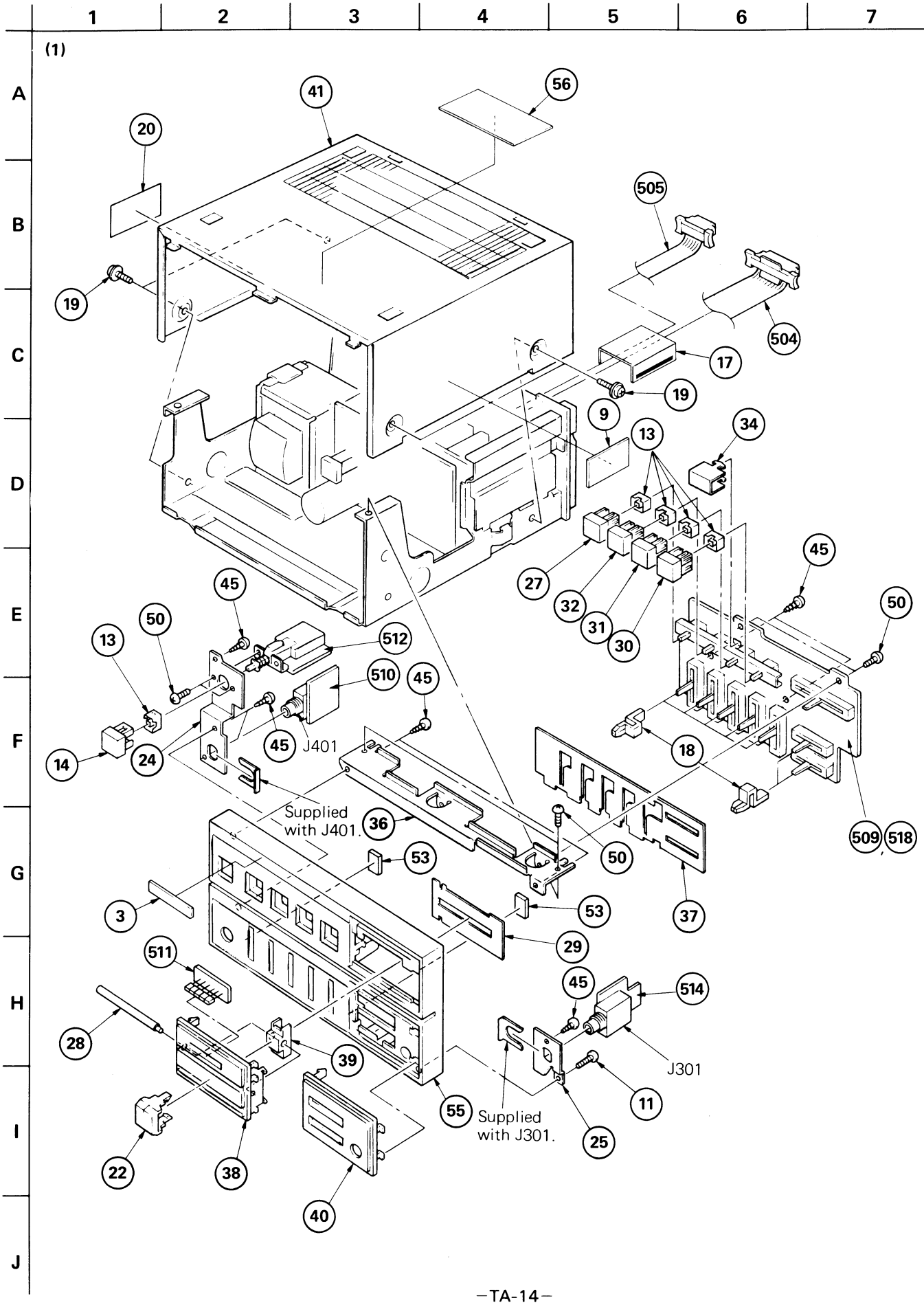
【POWER SWITCH BOARD】

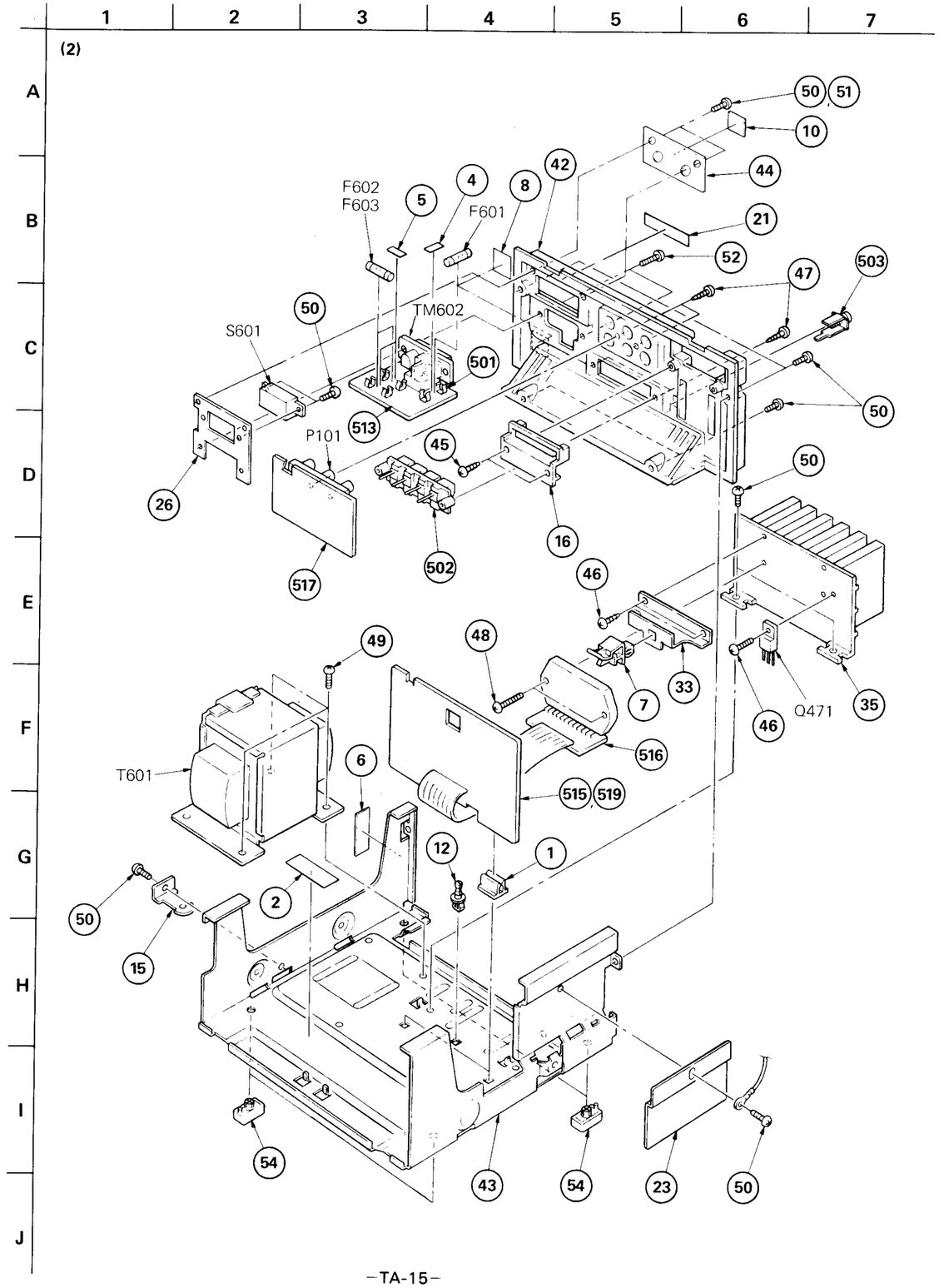
【AC/DC BOARD(1/2)】

【AC/DC BOARD(1/2)】
AEP, UK MODEL

Note: Voltages are measured with a VOM (50kΩ/V).

SECTION 4
EXPLODED VIEWS AND PARTS LIST





GENERAL SECTION

No.	Part No.	Description
1 ♦	3-642-310-11	HOLDER, CIRCUIT BOARD
2	3-701-030-00	LABEL, SERIAL NUMBER
3	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)
4 ♦	3-701-946-22	(US,Canadian)...LABEL, FUSE (1.6A)
5	3-701-946-30	(US,Canadian)...LABEL, FUSE (1.0A)
6	3-703-044-26	(US,Canadian)...LABEL, CAUTION
7 ♦	3-703-141-00	HOLDER, PCB
8	3-703-208-11	(US)....LABEL, IDENTIFICATION
9 ♦	3-703-678-00	(US,UK).....LABEL, CAUTION, NEW UL
9 ♦	3-703-845-01	(Canadian)...LABEL, CAUTION, NUW UL
10	3-703-680-00	(US)....LABEL, CAUTION, SUB, NEW UL
11	3-703-840-01	SCREW (2) (3.5X8), +P TAPPING
12 ♦	4-303-473-00	SUPPORT, PC
13	4-864-307-00	RING
14 ♦	4-884-810-21	(LIGHT SILVER,RED)...KNOB (POWER) (16X16), SQUARE
14	4-884-810-31	(BLACK).....KNOB (POWER) (16X16), SQUARE
15 ♦	4-884-820-00	BRACKET (B)
16 ♦	4-884-826-11	HOLDER (A), WIRE
17	4-884-875-00	LABEL (A) (CONNECTOR), CAUTION
18	4-886-818-51	(LIGHT SILVER,RED)...KNOB, CONTROL, SLIDE
18	4-886-818-61	(BLACK).....KNOB, CONTROL, SLIDE
19	4-886-821-01	(BLACK).....SCREW, M3 CASE
19	4-886-821-11	(LIGHT SILVER,RED)...SCREW, M3 CASE
20	4-902-905-01	(US).....LABEL, MODEL NUMBER
20	4-902-906-01	(Canadian)...LABEL, MODEL NUMBER
20	4-902-907-01	(AEP).....LABEL, MODEL NUMBER
20	4-902-908-01	(UK).....LABEL, MODEL NUMBER
20	4-902-909-01	(E).....LABEL, MODEL NUMBER
20	4-902-910-01	(G-AEP).....LABEL, MODEL NUMBER
21	4-902-947-11	(AEP,UK,G-AEP)...LABEL, AC OUTLET
22	4-902-952-01	(LIGHT SILVER,RED)...KNOB, CONTROL
22	4-902-952-11	(BLACK).....KNOB, CONTROL
23 ♦	4-902-953-01	RETAINER, WIRE
24 ♦	4-902-954-01	BRACKET, POWER SWITCH
25 ♦	4-902-955-01	BRACKET, MICROPHONE
26 ♦	4-902-956-01	(US,Canadian,E)...BRACKET, INLET
26 ♦	4-902-956-21	(AEP,UK,G-AEP)....BRACKET, INLET
27	4-902-957-01	(LIGHT SILVER,RED)...KNOB (TAPE), FUNCTION
27	4-902-957-11	(BLACK).....KNOB (TAPE), FUNCTION
28 ♦	4-902-958-01	SHAFT, SLIDE
29 ♦	4-902-959-01	PLATE (CONTROL), BLIND
30	4-902-960-01	(LIGHT SILVER,RED)...KNOB (PHONO), FUNCTION
30	4-902-960-11	(BLACK).....KNOB (PHONO), FUNCTION

GENERAL SECTION

No.	Part No.	Description
31	4-902-961-01	(LIGHT SILVER,RED)...KNOB (TUNER), FUNCTION
31	4-902-961-11	(BLACK).....KNOB (TUNER), FUNCTION
32	4-902-962-01	(LIGHT SILVER,RED)..KNOB (CD/AUX), FUNCTION
32	4-902-962-11	(BLACK).....KNOB (CD/AUX), FUNCTION
33 ♦	4-902-963-01	BRACKET, IC
34 ♦	4-902-964-01	BRACKET
35 ♦	4-902-965-01	HEAT SINK
36 ♦	4-902-966-01	REINFORCEMENT
37 ♦	4-902-967-01	PLATE (TA), BLIND
38	4-902-968-01	(LIGHT SILVER,BLACK)...PANEL, (VOL) CONTROL
38	4-902-968-11	(RED).....PANEL, (VOL) CONTROL
39	4-902-969-01	JOINT, CONTROL KNOB
40	4-902-970-01	(LIGHT SILVER,BLACK)...PANEL (BAL), CONTROL
40	4-902-970-11	(RED).....PANEL (BAL), CONTROL
41	4-902-971-01	(LIGHT SILVER)...CASE
41	4-902-971-11	(BLACK).....CASE
41	4-902-971-21	(RED).....CASE
42	4-902-973-11	(US,Canadian).....PLATE (TA), JACK
42	4-902-973-01	(AEP,UK,E,G-AEP)...PLATE (TA), JACK
43 ♦	4-902-974-01	CHASSIS
44	4-902-997-01	(US,Canadian)...COVER, SELECTION
45	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
46	7-685-646-71	SCREW +BVTP 3X8 TYPE2 SLIT
47	7-685-647-14	SCREW +BVTP 3X10 TYPE2 N-S
48	7-685-650-21	SCREW +BVTP 3X16 TYPE2 SLIT
49	7-685-870-01	SCREW +BVTT 3X5 (S)
50	7-685-871-01	SCREW +BVTT 3X6 (S)
51	7-685-872-01	(US,Canadian)...SCREW +BVTT 3X8 (S)
52	7-685-873-01	SCREW +BVTT 3X10 (S)
53	9-911-815-01	CUSHION
54	X-4884-801-0	FOOT ASSY, RUBBER
55	X-4902-925-4	(LIGHT SILVER)...PANEL, ASSY
55	X-4902-925-5	(BLACK).....PANEL, ASSY
55	X-4902-925-6	(RED).....PANEL, ASSY
56 ♦	3-703-678-00	(UK)....LABEL, CAUTION, NEW UL

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
501	1-533-162-00	HOLDER, FUSE			
502	1-536-705-21	TERMINAL BOARD (SP)			
503	1-536-742-00	TERMINAL BOARD, ANTENNA			
504	1-557-288-11	CORD (WITH CONNECTOR)			
505	1-557-289-11	CORD (WITH CONNECTOR)			
506	♦;1-562-249-00	SOCKET, CONNECTOR 4P			
507	♦;1-562-250-00	SOCKET, CONNECTOR 5P			
508	♦;1-562-327-00	SOCKET, CONNECTOR 3P			
509	♦;1-612-032-11	PC BOARD, G.E			
510	♦;1-612-033-11	PC BOARD, HEADPHONE			
511	♦;1-612-034-11	PC BOARD, LED METER			
512	♦;1-612-035-11	PC BOARD, POWER SWITCH			
513	♦;1-612-036-11	PC BOARD, AC/DC			
514	♦;1-612-037-11	PC BOARD, MIC			
515	♦;1-612-038-11	PC BOARD, POWER			
516	♦;1-612-039-11	PC BOARD, POWER IC			
517	♦;1-612-040-11	PC BOARD, PHONO			
518	♦;A-4375-187-A	MOUNTED PCB, GE CONTROL			
519	♦;A-4388-374-A	MOUNTED PCB, POWER			
♦BP401	;1-508-830-12	H TYPE BASE POST			
♦BP402	;1-508-830-12	H TYPE BASE POST			
♦BP501	;1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
♦BP601	;1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
♦BP602	;1-535-139-00	BASE POST 22MM (10MM PITCH) 2P			
C101	1-123-611-00	ELECT	1MF	20%	50V
C102	1-102-112-00	CERAMIC	330PF	10%	50V
C103	1-123-612-00	ELECT	2.2MF	20%	50V
C104	1-130-473-00	MYLAR	0.0015MF	5%	50V
C105	1-130-480-00	MYLAR	0.0056MF	5%	50V
C106	1-123-611-00	ELECT	1MF	20%	50V
C131	1-123-493-00	ELECT	47MF	20%	25V
C132	1-123-307-00	ELECT	100MF	20%	10V
C151	1-123-611-00	ELECT	1MF	20%	50V
C152	1-102-112-00	CERAMIC	330PF	10%	50V
C153	1-123-612-00	ELECT	2.2MF	20%	50V
C154	1-130-473-00	MYLAR	0.0015MF	5%	50V
C155	1-130-480-00	MYLAR	0.0056MF	5%	50V
C156	1-123-611-00	ELECT	1MF	20%	50V
C201	1-161-313-00	CERAMIC	150PF	10%	50V
C202	1-123-381-00	ELECT	2.2MF	20%	50V
C204	1-161-269-00	CERAMIC	68PF	5%	50V
C205	1-123-611-00	ELECT	1MF	20%	50V
C206	1-130-491-00	MYLAR	0.047MF	5%	50V
C207	1-123-608-00	ELECT	0.22MF	20%	50V
C208	1-130-484-00	MYLAR	0.012MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C209	1-123-607-00	ELECT	0.1MF	20%	50V
C210	1-130-479-00	MYLAR	0.0047MF	5%	50V
C211	1-130-487-00	MYLAR	0.022MF	5%	50V
C212	1-130-472-00	MYLAR	0.0012MF	5%	50V
C213	1-130-483-00	MYLAR	0.01MF	5%	50V
C214	1-102-112-00	CERAMIC	330PF	10%	50V
C215	1-123-381-00	ELECT	2.2MF	20%	50V
C216	1-123-381-00	ELECT	2.2MF	20%	50V
C217	1-102-106-00	CERAMIC	100PF	10%	50V
C218	1-123-616-00	ELECT	4.7MF	20%	25V
C241	1-123-477-00	ELECT	470MF	20%	10V
C251	1-161-313-00	CERAMIC	150PF	10%	50V
C252	1-123-381-00	ELECT	2.2MF	20%	50V
C254	1-161-269-00	CERAMIC	68PF	5%	50V
C255	1-123-611-00	ELECT	1MF	20%	50V
C256	1-130-491-00	MYLAR	0.047MF	5%	50V
C257	1-123-608-00	ELECT	0.22MF	20%	50V
C258	1-130-484-00	MYLAR	0.012MF	5%	50V
C259	1-123-607-00	ELECT	0.1MF	20%	50V
C260	1-130-479-00	MYLAR	0.0047MF	5%	50V
C261	1-130-487-00	MYLAR	0.022MF	5%	50V
C262	1-130-472-00	MYLAR	0.0012MF	5%	50V
C263	1-130-483-00	MYLAR	0.01MF	5%	50V
C264	1-102-112-00	CERAMIC	330PF	10%	50V
C265	1-123-381-00	ELECT	2.2MF	20%	50V
C266	1-123-381-00	ELECT	2.2MF	20%	50V
C267	1-102-106-00	CERAMIC	100PF	10%	50V
C268	1-123-616-00	ELECT	4.7MF	20%	25V
C301	1-123-381-00	ELECT	2.2MF	20%	50V
C302	1-101-005-00	CERAMIC	0.022MF	10%	50V
C303	1-123-381-00	ELECT	2.2MF	20%	50V
C304	1-123-493-00	ELECT	47MF	20%	25V
C401	1-123-611-00	ELECT	1MF	20%	50V
C402	1-102-114-00	CERAMIC	470PF	10%	50V
C403	1-123-345-00	ELECT	100MF	20%	25V
C404 ⚠	1-123-513-00	ELECT	100MF	20%	50V
C405 ⚠	1-123-509-00	ELECT	2200MF	20%	35V
C406	1-130-528-00	MYLAR	0.1MF	10%	50V
C408	1-130-528-00	MYLAR	0.1MF	10%	50V
C431	1-123-345-00	ELECT	100MF	20%	25V
C432	1-123-513-00	ELECT	100MF	20%	50V
C433	1-123-345-00	ELECT	100MF	20%	25V
C434	1-123-512-00	ELECT	47MF	20%	50V
C435	1-123-610-00	ELECT	0.47MF	20%	50V
C436	1-123-356-00	ELECT	10MF	20%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C437	1-123-356-00	ELECT	10MF	20%	50V
C451	1-123-611-00	ELECT	1MF	20%	50V
C452	1-102-114-00	CERAMIC	470PF	10%	50V
C453	1-123-345-00	ELECT	100MF	20%	25V
C454 ⚠	1-123-513-00	ELECT	100MF	20%	50V
C455 ⚠	1-123-509-00	ELECT	2200MF	20%	35V
C456	1-130-528-00	MYLAR	0.1MF	10%	50V
C458	1-130-528-00	MYLAR	0.1MF	10%	50V
C471 ⚠	1-125-364-11	ELECT(BLOCK)	4700MF	20%	50V
C472 ⚠	1-102-394-00	CERAMIC	0.01MF		250V
C473 ⚠	1-102-394-00	CERAMIC	0.01MF		250V
C474 ⚠	1-123-338-00	ELECT	2200MF	20%	25V
C475 ⚠	1-123-495-00	ELECT	220MF	20%	25V
C501 ⚠	1-161-744-00	CERAMIC	0.01MF		400V
C502	1-101-006-00	CERAMIC	0.047MF		50V
♦CNJ201	;1-564-119-11	PIN, CONNECTOR 10P			
♦CNJ202	;1-564-117-11	PIN, CONNECTOR 8P			
♦CNJ203	;1-564-114-11	PIN, CONNECTOR 5P			
♦CNJ204	;1-564-114-21	PIN, CONNECTOR 5P			
♦CNJ301	;1-564-111-00	PIN, CONNECTOR 2P			
♦CNJ401	;1-564-111-00	PIN, CONNECTOR 2P			
♦CNJ402	;1-560-604-00	PIN, CONNECTOR 5P			
♦CNJ403	;1-560-605-00	PIN, CONNECTOR 6P			
♦CNJ501	;1-560-602-00	PIN, CONNECTOR 3P			
♦CNJ601	;1-560-602-00	PIN, CONNECTOR 3P			
D431	8-719-101-32	DIODE RD2.7E-L1			
D433	8-719-910-61	DIODE HZ6A1L			
D434	8-719-022-21	DIODE 1T22A			
D435	8-719-022-21	DIODE 1T22A			
D471 ⚠	8-719-300-57	DIODE RB402			
D472 ⚠	8-719-910-11	DIODE HZ11A1L			
D501	8-719-925-26	DIODE SLP252B-06(LED)			
F601 ⚠	1-532-555-00	(US,Canadian)....FUSE, GLASS TUBE (1.6A)			
F601 ⚠	1-532-259-00	(AEP,UK,E,G-AEP)...FUSE, TIME-LAG (1.6A)			
F602 ⚠	1-532-536-00	(US,Canadian)....FUSE, GLASS-TUBE (1.0A)			
F602 ⚠	1-532-078-00	(AEP,UK,E,G-AEP)...FUSE, TIME-LAG (1.0A)			
F603 ⚠	1-532-536-00	(US,Canadian)...FUSE, GLASS-TUBE (1.0A)			
F603 ⚠	1-532-078-00	(E).....FUSE, TIME-LAG (1.0A)			
IC101	8-759-600-02	IC M5218L			
IC201	8-759-145-58	IC UPC4558C			
IC202	8-759-145-58	IC UPC4558C			
⚠ IC401	8-749-943-11	IC STK4311			
IC402	8-759-800-28	IC LB1413			
J301	1-507-857-00	JACK, LARGE TYPE (MIC)			
J401	1-507-849-00	JACK, LARGE TYPE (HEADPHONES)			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
P101	1-507-914-21	JACK, PIN 6P			
Q201	8-729-245-83	TRANSISTOR 2SC2458			
Q202	8-729-245-83	TRANSISTOR 2SC2458			
Q203	8-729-245-83	TRANSISTOR 2SC2458			
Q204	8-729-245-83	TRANSISTOR 2SC2458			
Q205	8-729-245-83	TRANSISTOR 2SC2458			
Q251	8-729-245-83	TRANSISTOR 2SC2458			
Q252	8-729-245-83	TRANSISTOR 2SC2458			
Q253	8-729-245-83	TRANSISTOR 2SC2458			
Q254	8-729-245-83	TRANSISTOR 2SC2458			
Q255	8-729-245-83	TRANSISTOR 2SC2458			
Q301	8-729-245-83	TRANSISTOR 2SC2458			
Q401	8-729-245-83	TRANSISTOR 2SC2458			
Q402	8-729-204-83	TRANSISTOR 2SA1048-GR			
Q451	8-729-245-83	TRANSISTOR 2SC2458			
Q452	8-729-204-83	TRANSISTOR 2SA1048-GR			
Q471	8-729-201-78	TRANSISTOR 2SD1406			
R101	1-247-875-00	CARBON	68K	5%	1/6W
R102	1-247-831-00	CARBON	1K	5%	1/6W
R103	1-247-885-00	CARBON	180K	5%	1/6W
R104	1-247-831-00	CARBON	1K	5%	1/6W
R105	1-247-871-00	CARBON	47K	5%	1/6W
R106	1-247-901-00	CARBON	820K	5%	1/6W
R107	1-247-839-00	CARBON	2.2K	5%	1/6W
R108	1-247-841-00	CARBON	2.7K	5%	1/6W
R131	1-247-871-00	CARBON	47K	5%	1/6W
R132	1-247-872-00	CARBON	51K	5%	1/6W
R151	1-247-875-00	CARBON	68K	5%	1/6W
R152	1-247-831-00	CARBON	1K	5%	1/6W
R153	1-247-885-00	CARBON	180K	5%	1/6W
R154	1-247-831-00	CARBON	1K	5%	1/6W
R155	1-247-871-00	CARBON	47K	5%	1/6W
R156	1-247-901-00	CARBON	820K	5%	1/6W
R157	1-247-839-00	CARBON	2.2K	5%	1/6W
R158	1-247-841-00	CARBON	2.7K	5%	1/6W
R201	1-247-839-00	CARBON	2.2K	5%	1/6W
R202	1-247-866-00	CARBON	30K	5%	1/6W
R203	1-247-839-00	CARBON	2.2K	5%	1/6W
R204	1-247-867-00	CARBON	33K	5%	1/6W
R205	1-247-855-00	CARBON	10K	5%	1/6W
R206	1-247-839-00	CARBON	2.2K	5%	1/6W
R207	1-247-874-00	CARBON	62K	5%	1/6W
R210	1-247-871-00	CARBON	47K	5%	1/6W
R211	1-247-831-00	CARBON	1K	5%	1/6W

NOTE:
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- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R212	1-247-833-00	CARBON	1.2K	5%	1/6W
R213	1-247-847-00	CARBON	4.7K	5%	1/6W
R214	1-247-871-00	CARBON	47K	5%	1/6W
R215	1-247-831-00	CARBON	1K	5%	1/6W
R216	1-247-833-00	CARBON	1.2K	5%	1/6W
R217	1-247-847-00	CARBON	4.7K	5%	1/6W
R218	1-247-871-00	CARBON	47K	5%	1/6W
R219	1-247-831-00	CARBON	1K	5%	1/6W
R220	1-247-833-00	CARBON	1.2K	5%	1/6W
R221	1-247-847-00	CARBON	4.7K	5%	1/6W
R222	1-247-871-00	CARBON	47K	5%	1/6W
R223	1-247-831-00	CARBON	1K	5%	1/6W
R224	1-247-833-00	CARBON	1.2K	5%	1/6W
R225	1-247-847-00	CARBON	4.7K	5%	1/6W
R226	1-247-871-00	CARBON	47K	5%	1/6W
R227	1-247-831-00	CARBON	1K	5%	1/6W
R228	1-247-833-00	CARBON	1.2K	5%	1/6W
R229	1-247-847-00	CARBON	4.7K	5%	1/6W
R230	1-247-845-00	CARBON	3.9K	5%	1/6W
R232	1-247-845-00	CARBON	3.9K	5%	1/6W
R235	1-247-833-00	CARBON	1.2K	5%	1/6W
R236	1-247-847-00	CARBON	4.7K	5%	1/6W
R237	1-247-847-00	CARBON	4.7K	5%	1/6W
R241	1-247-843-00	CARBON	3.3K	5%	1/6W
R242	1-247-841-00	CARBON	2.7K	5%	1/6W
R251	1-247-839-00	CARBON	2.2K	5%	1/6W
R252	1-247-866-00	CARBON	30K	5%	1/6W
R253	1-247-839-00	CARBON	2.2K	5%	1/6W
R254	1-247-867-00	CARBON	33K	5%	1/6W
R255	1-247-855-00	CARBON	10K	5%	1/6W
R257	1-247-874-00	CARBON	62K	5%	1/6W
R260	1-247-871-00	CARBON	47K	5%	1/6W
R261	1-247-831-00	CARBON	1K	5%	1/6W
R262	1-247-833-00	CARBON	1.2K	5%	1/6W
R263	1-247-847-00	CARBON	4.7K	5%	1/6W
R264	1-247-871-00	CARBON	47K	5%	1/6W
R265	1-247-831-00	CARBON	1K	5%	1/6W
R266	1-247-833-00	CARBON	1.2K	5%	1/6W
R267	1-247-847-00	CARBON	4.7K	5%	1/6W
R268	1-247-871-00	CARBON	47K	5%	1/6W
R269	1-247-831-00	CARBON	1K	5%	1/6W
R270	1-247-833-00	CARBON	1.2K	5%	1/6W
R271	1-247-847-00	CARBON	4.7K	5%	1/6W
R272	1-247-871-00	CARBON	47K	5%	1/6W
R273	1-247-831-00	CARBON	1K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R274	1-247-833-00	CARBON	1.2K	5%	1/6W
R275	1-247-847-00	CARBON	4.7K	5%	1/6W
R276	1-247-871-00	CARBON	47K	5%	1/6W
R277	1-247-831-00	CARBON	1K	5%	1/6W
R278	1-247-833-00	CARBON	1.2K	5%	1/6W
R279	1-247-847-00	CARBON	4.7K	5%	1/6W
R280	1-247-845-00	CARBON	3.9K	5%	1/6W
R282	1-247-845-00	CARBON	3.9K	5%	1/6W
R285	1-247-833-00	CARBON	1.2K	5%	1/6W
R286	1-247-847-00	CARBON	4.7K	5%	1/6W
R287	1-247-847-00	CARBON	4.7K	5%	1/6W
R301	1-247-855-00	CARBON	10K	5%	1/6W
R302	1-247-855-00	CARBON	10K	5%	1/6W
R303	1-247-871-00	CARBON	47K	5%	1/6W
R304	1-247-841-00	CARBON	2.7K	5%	1/6W
R305	1-247-823-00	CARBON	470	5%	1/6W
R306	1-247-855-00	CARBON	10K	5%	1/6W
R401	1-247-855-00	CARBON	10K	5%	1/6W
R402	1-247-833-00	CARBON	1.2K	5%	1/6W
R403	1-247-847-00	CARBON	4.7K	5%	1/6W
R404	1-247-801-00	CARBON	56	5%	1/6W
R405	1-247-843-00	CARBON	3.3K	5%	1/6W
R406 ⚠	1-206-640-00	METAL OXIDE	100	5%	2W F
R409 ⚠	1-247-192-00	CARBON	10	5%	1/2W F
R410 ⚠	1-212-368-00	METAL OXIDE	4.7	5%	1W F
R411	1-247-863-00	CARBON	22K	5%	1/6W
R412	1-247-839-00	CARBON	2.2K	5%	1/6W
R431	1-247-848-00	CARBON	5.1K	5%	1/6W
R432	1-247-855-00	CARBON	10K	5%	1/6W
R433	1-247-839-00	CARBON	2.2K	5%	1/6W
R435	1-247-831-00	CARBON	1K	5%	1/6W
R436	1-247-867-00	CARBON	33K	5%	1/6W
R437	1-247-863-00	CARBON	22K	5%	1/6W
R438	1-247-855-00	CARBON	10K	5%	1/6W
R439	1-247-811-00	CARBON	150	5%	1/6W
R451	1-247-855-00	CARBON	10K	5%	1/6W
R452	1-247-833-00	CARBON	1.2K	5%	1/6W
R453	1-247-847-00	CARBON	4.7K	5%	1/6W
R454	1-247-801-00	CARBON	56	5%	1/6W
R455	1-247-843-00	CARBON	3.3K	5%	1/6W
R456 ⚠	1-206-640-00	METAL OXIDE	100	5%	2W F
R459 ⚠	1-247-192-00	CARBON	10	5%	1/2W F
R460 ⚠	1-212-368-00	METAL OXIDE	4.7	5%	1W F
R461	1-247-863-00	CARBON	22K	5%	1/6W
R462	1-247-839-00	CARBON	2.2K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R471 ⚠	1-247-232-00	CARBON	470	5%	1/2W F
R472	1-247-823-00	CARBON	470	5%	1/6W
R501	1-247-119-00	CARBON	330	5%	1/4W
R551	1-247-119-00	CARBON	330	5%	1/4W
R601 ⚠	1-202-723-00	(US,Canadian)...SOLID	2.2M	10%	1/2W
R602 ⚠	1-212-934-00	FUSE	1	5%	1/2W F
RV201	1-230-362-11	RES, VAR, SLIDE 250K/250K(G.EQ 100Hz)			
RV202	1-230-362-11	RES, VAR, SLIDE 250K/250K(G.EQ 400Hz)			
RV203	1-230-362-11	RES, VAR, SLIDE 250K/250K(G.EQ 1KHz)			
RV204	1-230-362-11	RES, VAR, SLIDE 250K/250K(G.EQ 4KHz)			
RV205	1-230-362-11	RES, VAR, SLIDE 250K/250K(G.EQ 12KHz)			
RV206	1-230-360-11	RES, VAR, SLIDE 100K (BALANCE)			
RV207	1-230-359-11	RES, VAR, SLIDE 100K/100K(VOLUME)			
RV301	1-230-361-11	RES, VAR, SLIDE 50K (MIC LEVEL)			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S201	1-554-755-11	SWITCH, PUSH (4 KEY)(FUNCTION SWITCH)
S501 ⚠	1-554-753-11	(US,Canadian)...SWITCH, PUSH (AC POWER) (1 KEY)(POWER SWITCH)
S501 ⚠	1-554-754-11	(AEP,UK,E,G-AEP)...SWITCH,PUSH(AC POWER) (1 KEY)(POWER SWITCH)
S601 ⚠	1-554-752-11	(US,Canadian,E)..SWITCH, VOLTAGE CHANGE (VOLTAGE SELECTOR)
T601 ⚠	1-447-771-11	(US,Canadian)....TRANSFORMER, POWER
T601 ⚠	1-447-772-11	(E).....TRANSFORMER, POWER
T601 ⚠	1-447-773-11	(AEP,UK,G-AEP)...TRANSFORMER, POWER
⚠ TM602	1-561-926-00	(US,Canadian)...INLET, AC DC (DC IN 12V)
⚠ TM602	1-562-447-11	(AEP,UK,E,G-AEP)...INLET, AC DC (DC IN 12V)

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

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In each case, U : μ, for example:
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The components identified by shading and mark ⚠ are critical for safety.
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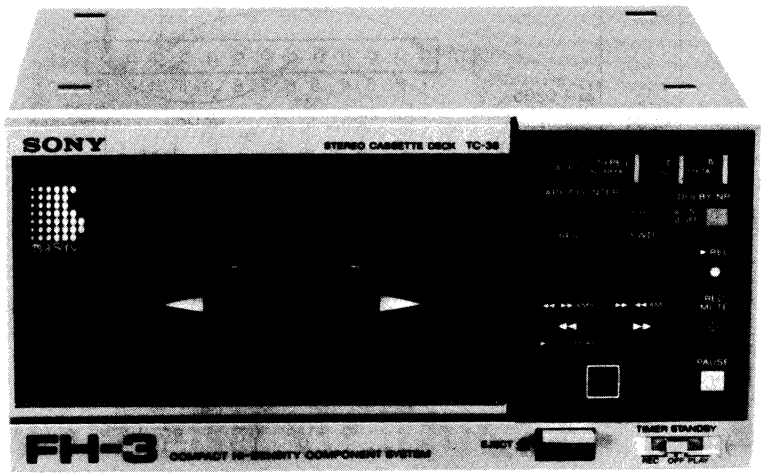
Ne les remplacer que par une pièce portant le numéro spécifié.

STEREO CASSETTE DECK
(TC-38)

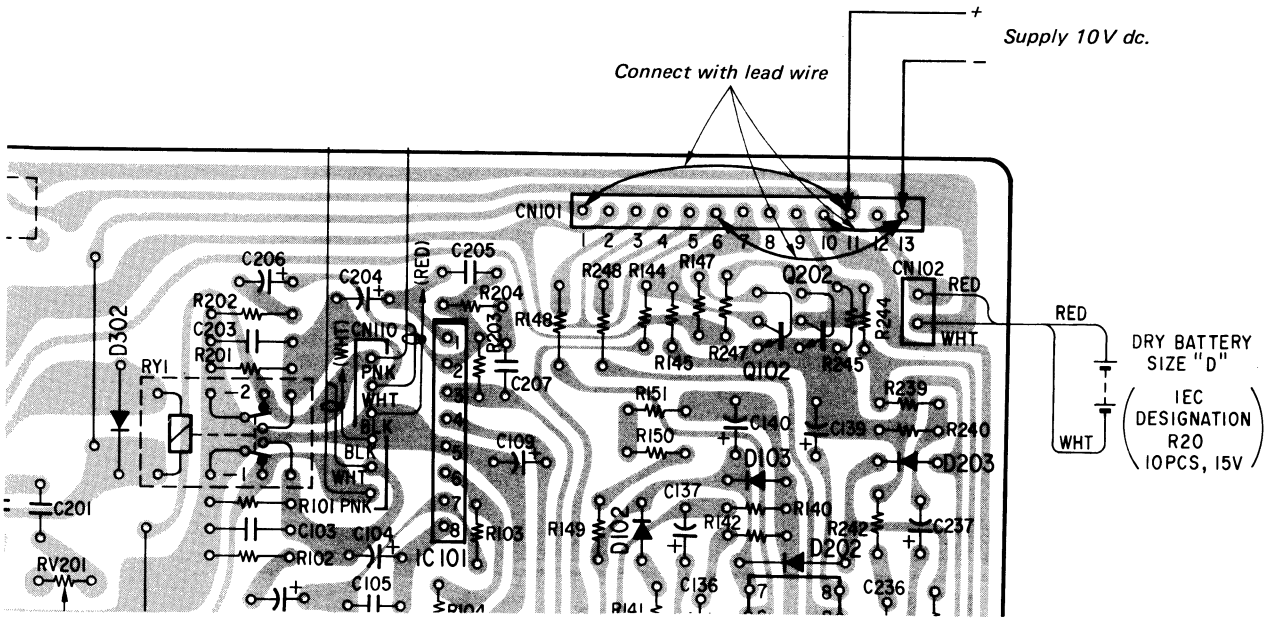


Note: TC-38 is a stereo cassette deck unit in FH-3.

Tape Transport Mechanism Type	**TCM-130R10**

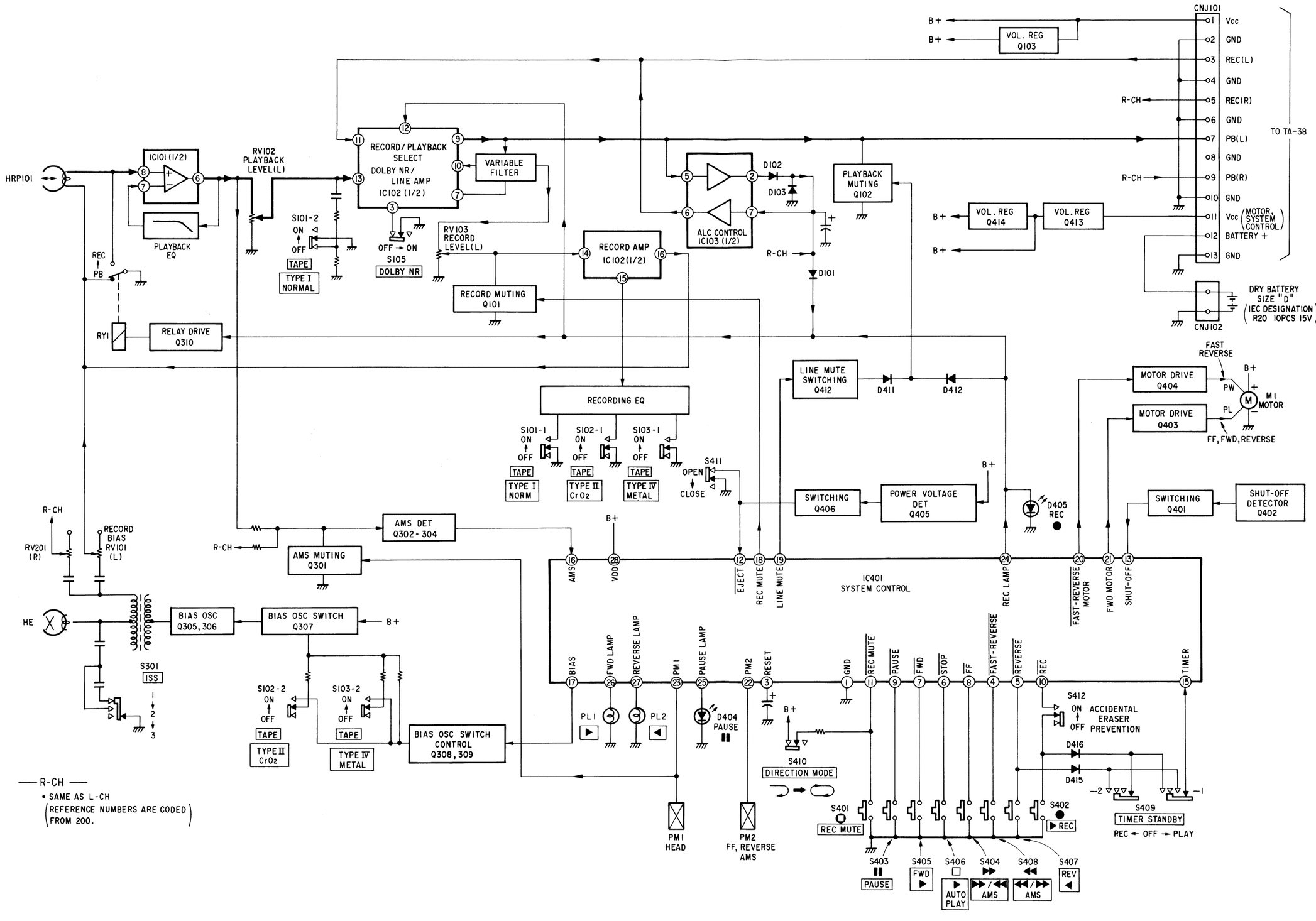
SERVICING NOTE

1. Voltage measurement should be made under the following condition.



2. When operating by batteries, this set will be shut off if the power voltage drops to about 8 – 9 V (Q405, 406). Be careful of the power voltage when repairing.

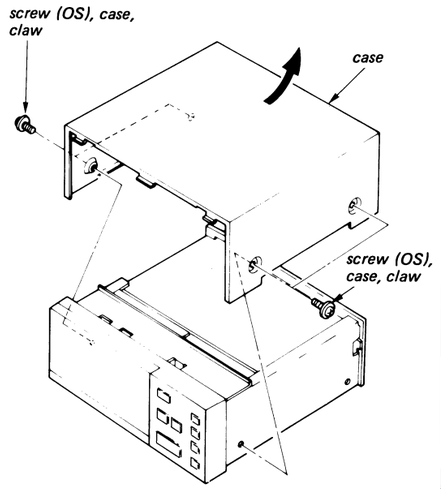
SECTION 1
BLOCK DIAGRAM



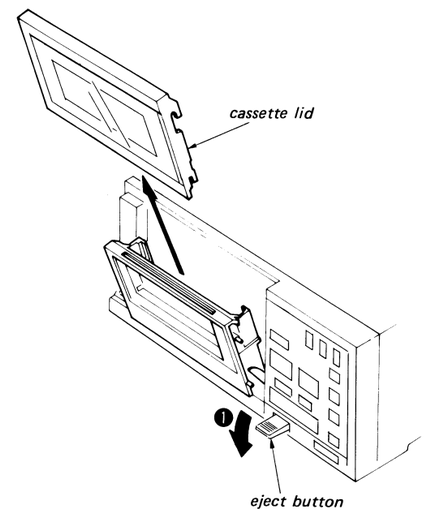
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

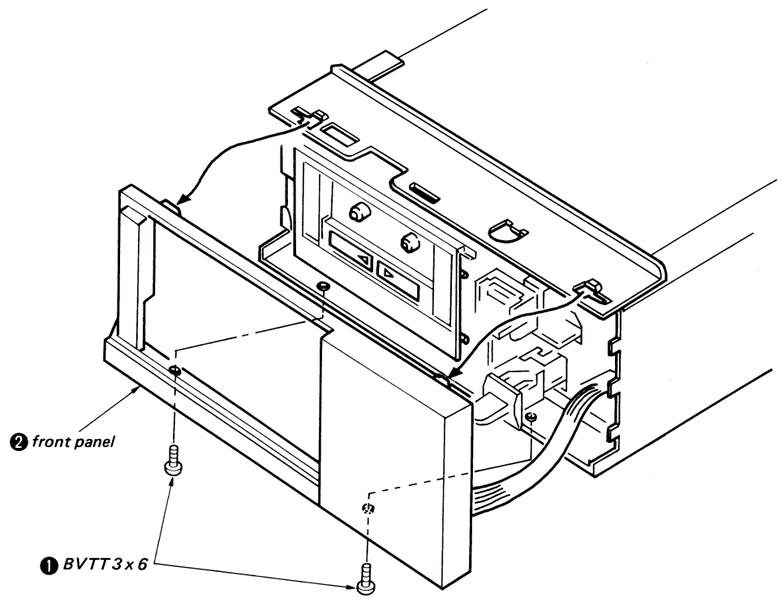
CASE



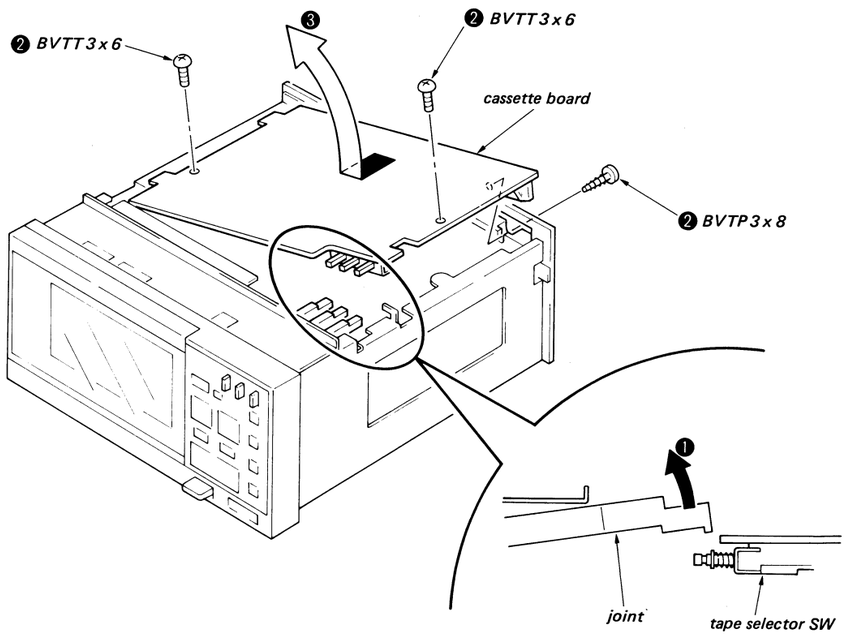
CASSETTE LID



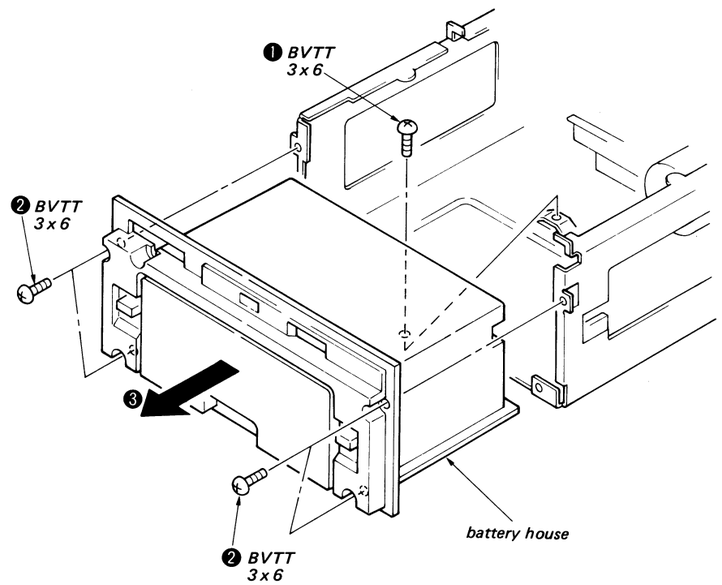
FRONT PANEL



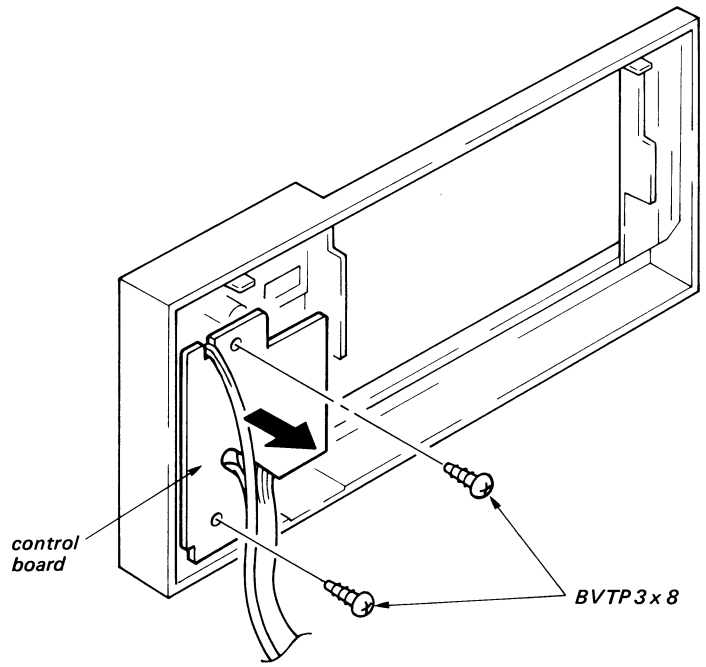
CASSETTE BOARD



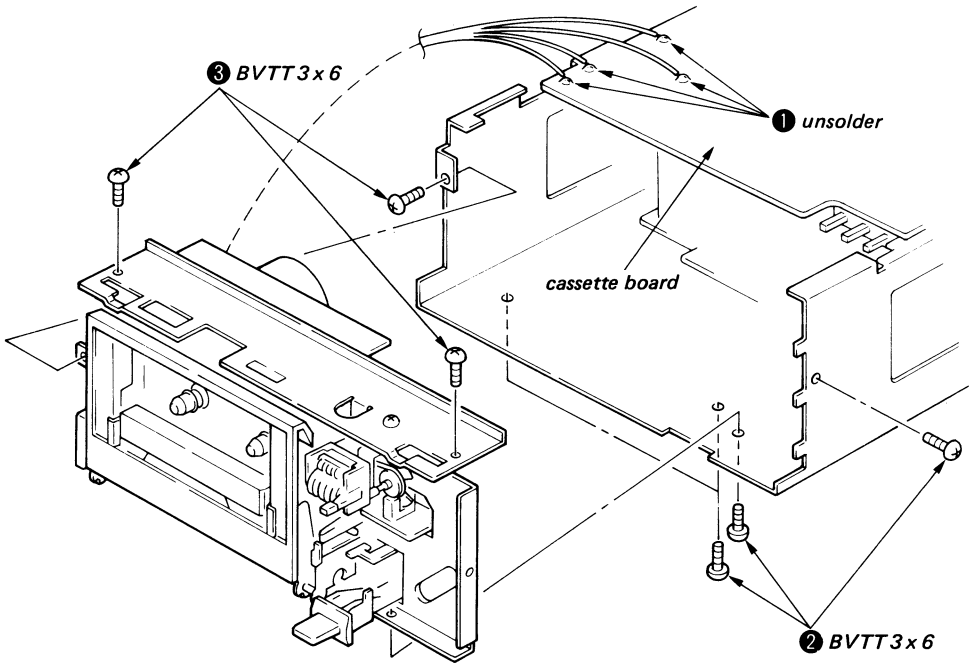
BATTERY HOUSE



CONTROL BOARD

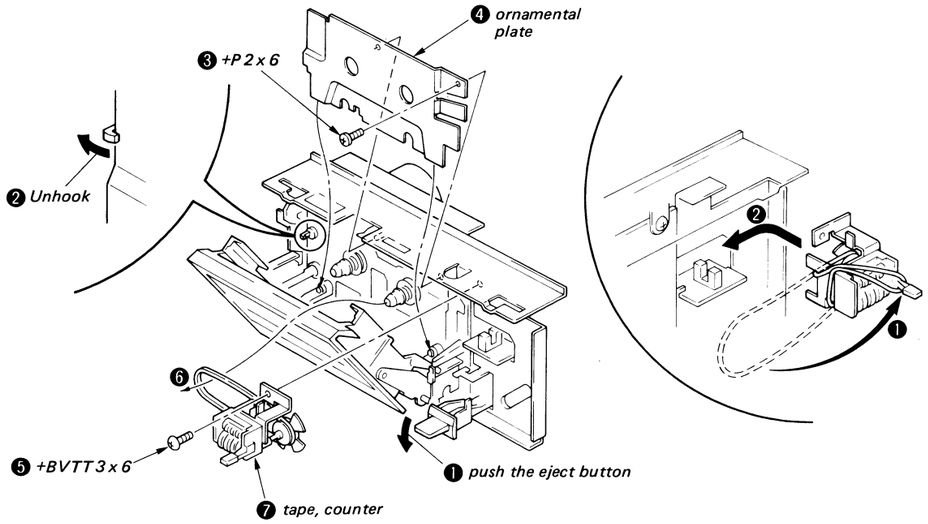


MECHANISM BLOCK (1)

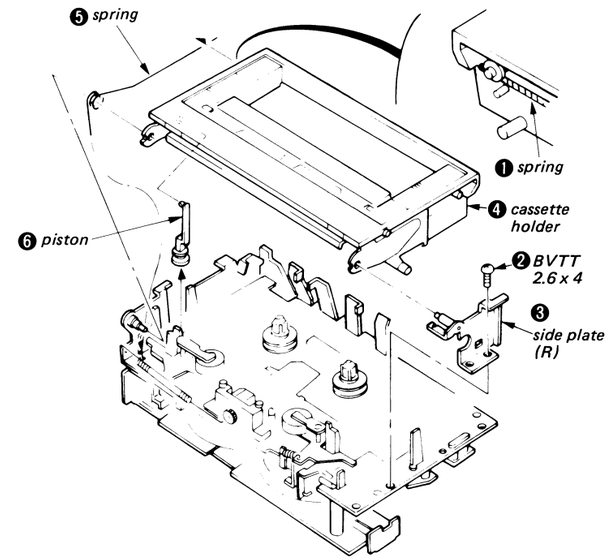


FH-3
TC-38
FH-3
TC-38

MECHANISM BLOCK (2)

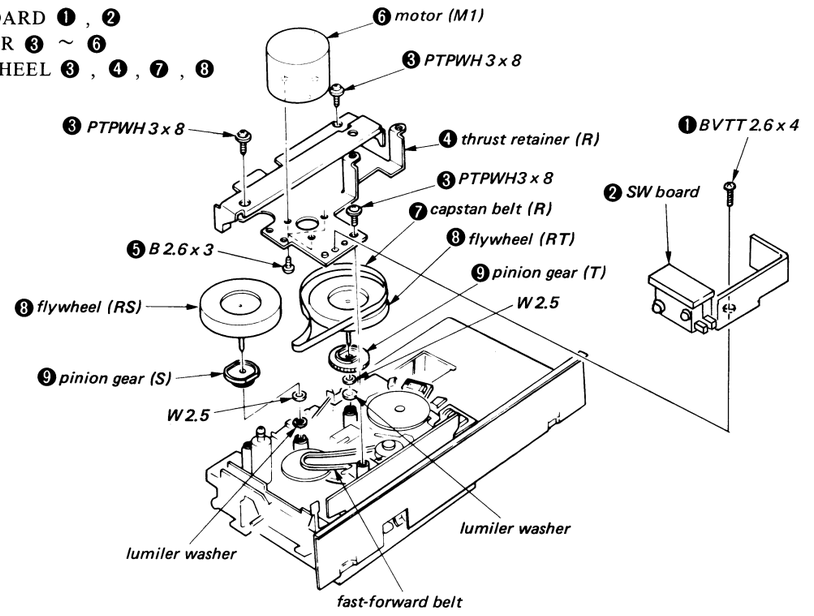


CASSETTE HOLDER

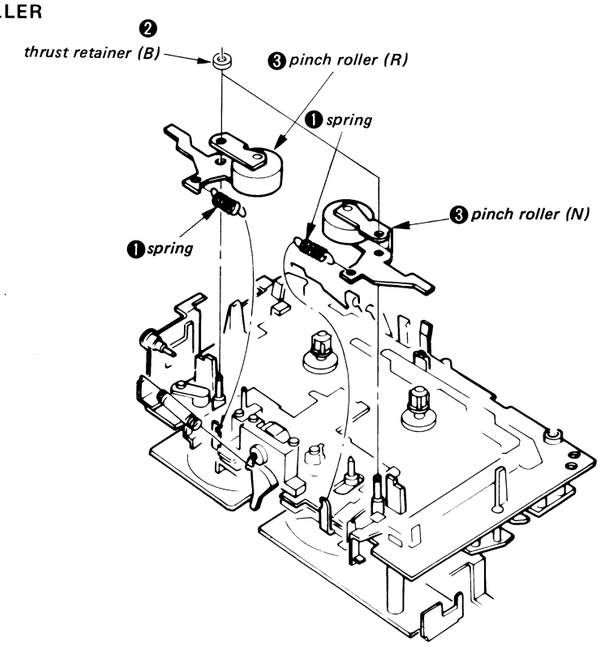


MOTOR, FLYWHEEL, SW BOARD

SW BOARD ❶ , ❷
MOTOR ❸ ~ ❻
FLYWHEEL ❸ , ❹ , ❼ , ❽



PINCH ROLLER



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

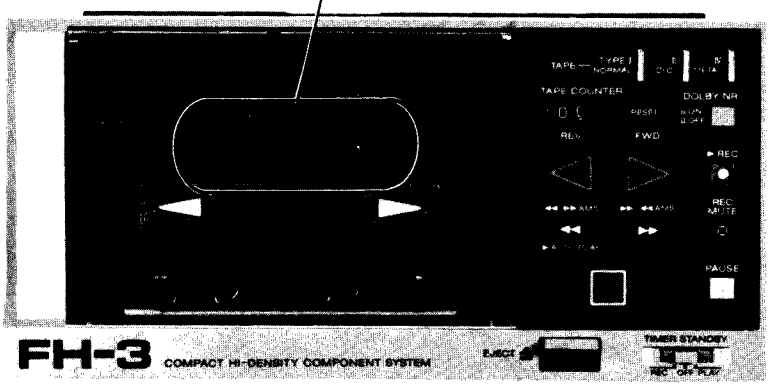
1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage (dc 10 V) unless otherwise noted.

Torque Measurement

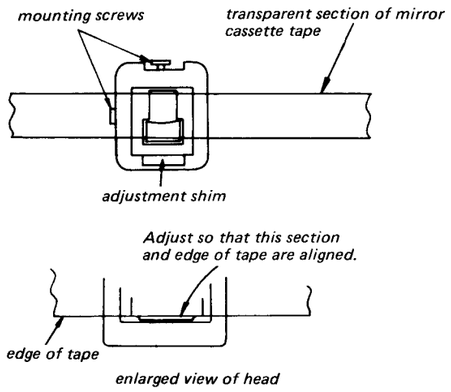
Torque	Torque meter	Meter reading
FWD	CQ-102C	28 – 60 g·cm (0.39 – 0.83 oz·inch)
FWD Back tension	CQ-102C	2 – 7 g·cm (0.03 – 0.1 oz·inch)
REV	CQ-102R	28 – 60 g·cm (0.39 – 0.83 oz·inch)
REV Back tension	CQ-102R	2 – 8 g·cm (0.03 – 0.1 oz·inch)
FF, REW	CQ-201B	80 – 165 g·cm (1.1 – 2.28 oz·inch)



Head Height Adjustment

The following adjustments should be made when the record/playback head is replaced.

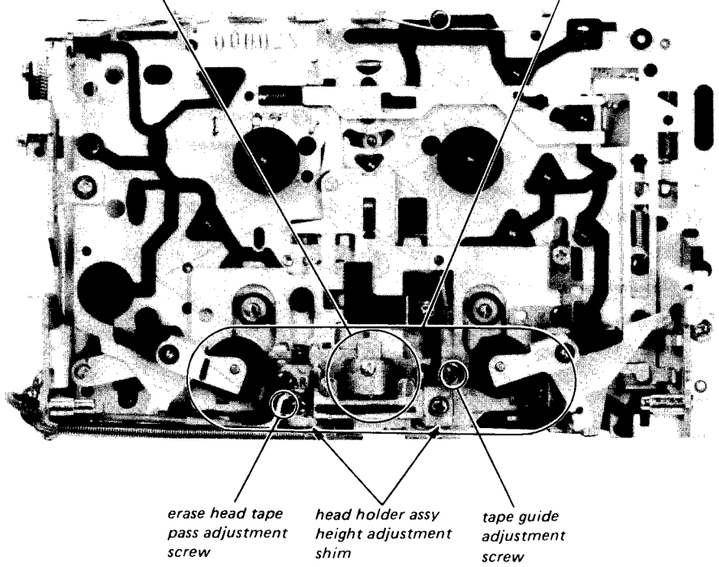
1. The head should be made after removing the head pad of the mirror cassette tape.
2. Using the leader section of the mirror cassette tape, adjustments are made by changing the adjusting shim so that the core and the edge of the tape become as shown in the illustration below when the tape is moved across the head.


mounting screws
transparent section of mirror cassette tape
adjustment shim
Adjust so that this section and edge of tape are aligned.
edge of tape
enlarged view of head

Tape Path Adjustment

When assembling the erase head and head holder, and when replacing the tape guide (L), be sure to perform the following adjustments.

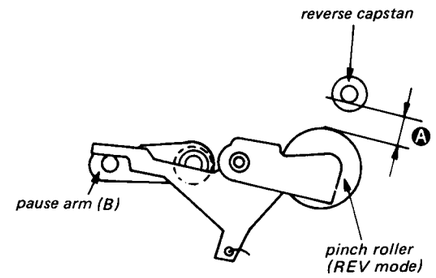
1. Using a mirror cassette, adjust each of the adjustment screws until there is no tape curling.
2. Perform adjustments by changing the height adjustment shim of the head holder assembly and the height adjustment shim of the record/playback head, so that the core of the record/playback head is positioned correctly for both FWD and REV.

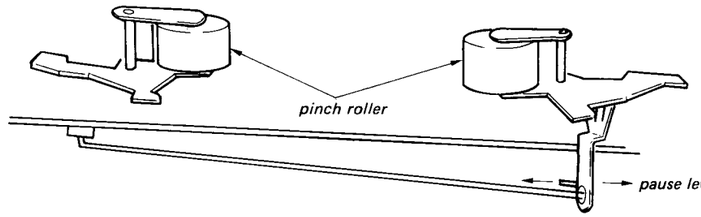


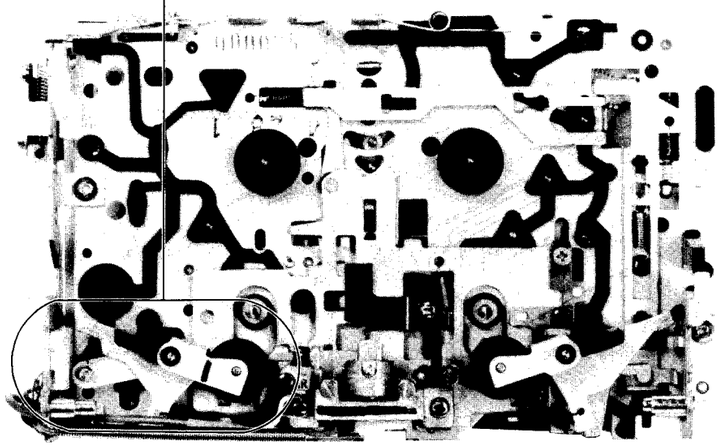
Pause Arm Position Adjustment

1. Mode: reverse pause.
2. Bend pause lever (R) so that the distance of Ⓐ is within the specification.

Specification: 0.5 ~ 1.0 mm

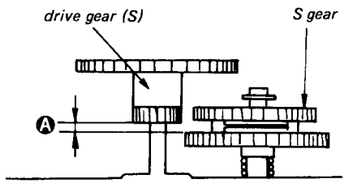


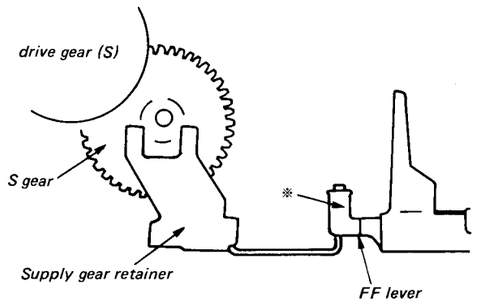


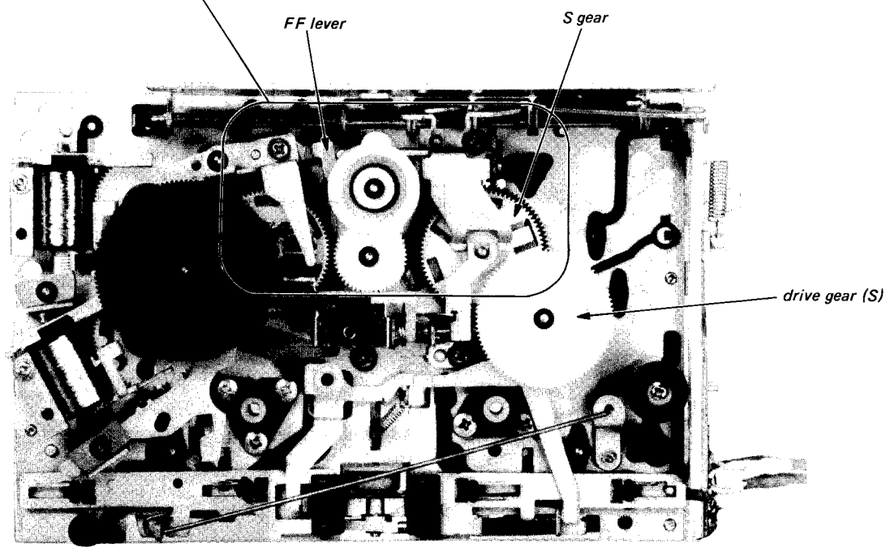


Supply Gear Retainer Position Adjustment

1. Mode: reverse pause.
2. Bend the FF lever at the place indicated by the asterik (※) to make adjustments so that the clearance of Ⓐ is 1 ±0.5 mm.



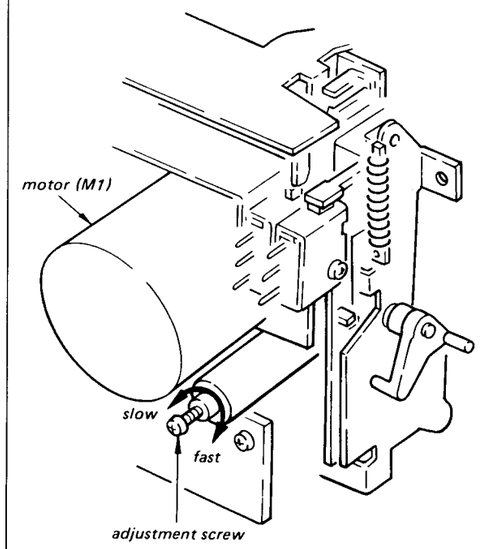




Cassette Holder Opening Speed Adjustment

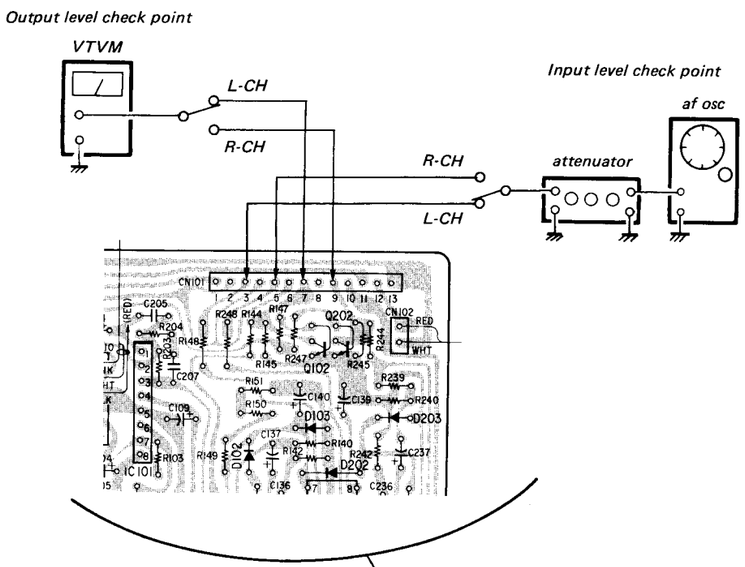
1. Insert a CHF-90 or equivalent tape (in terms of weight).
2. Adjust the adjustment screw so that the opening time required for the cassette holder is 0.4 – 2.5 seconds when the EJECT button is depressed.

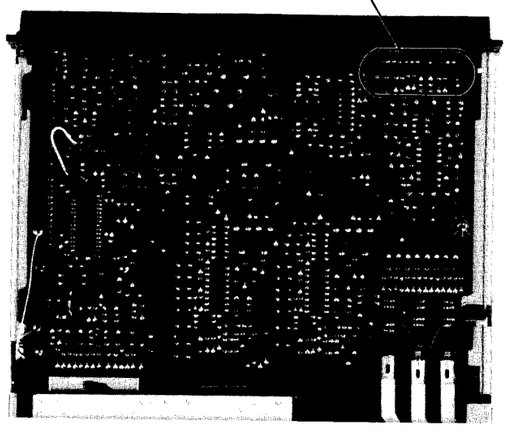
Adjustment Location:



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. (Playback section may be adjusted earlier than record section.)
The adjustments should be performed for both L-CH and R-CH.





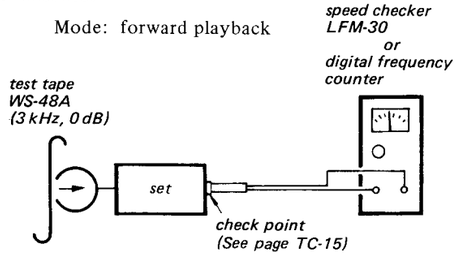
Tape Speed Adjustment

Setting:

TAPE switch: NORMAL
DOLBY NR switch: OFF

Procedure:

Mode: forward playback

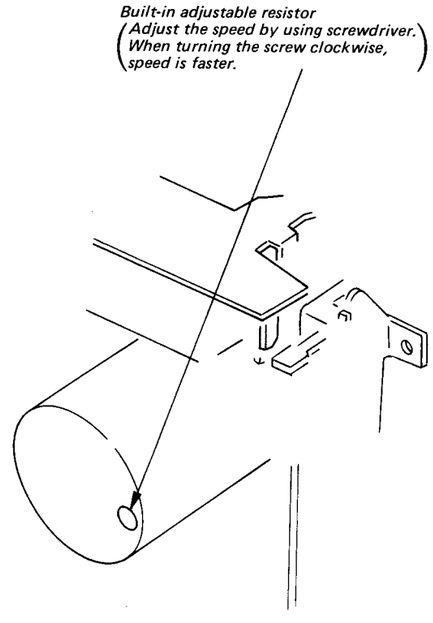


Specifications:

Speed checker	Digital frequency counter
±0.5%	2,985 – 3,015 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

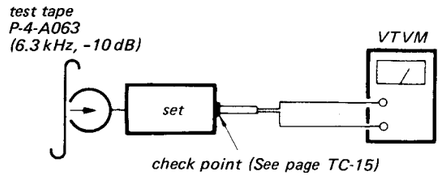
Adjustment Location: Motor (M1)



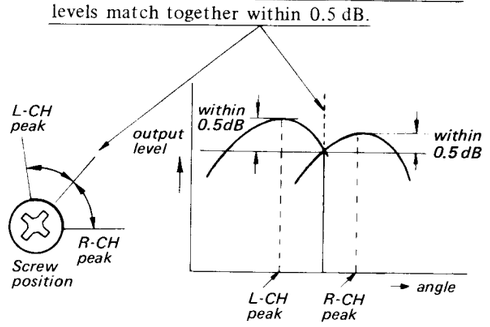
Forward Record/playback Head Azimuth Adjustment

Procedure:

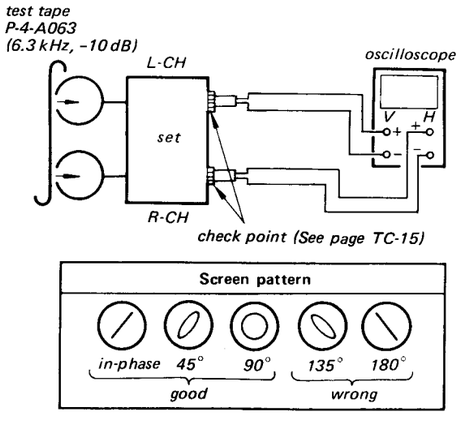
1. Mode: forward playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

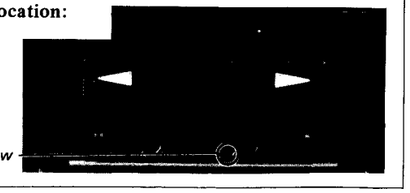


3. Pahse Check
Mode: forward playback



4. After the adjustment, lock the screws with locking compound.

Adjustment Location:

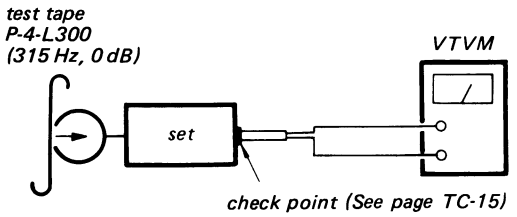


Playback Level Adjustment

Setting:

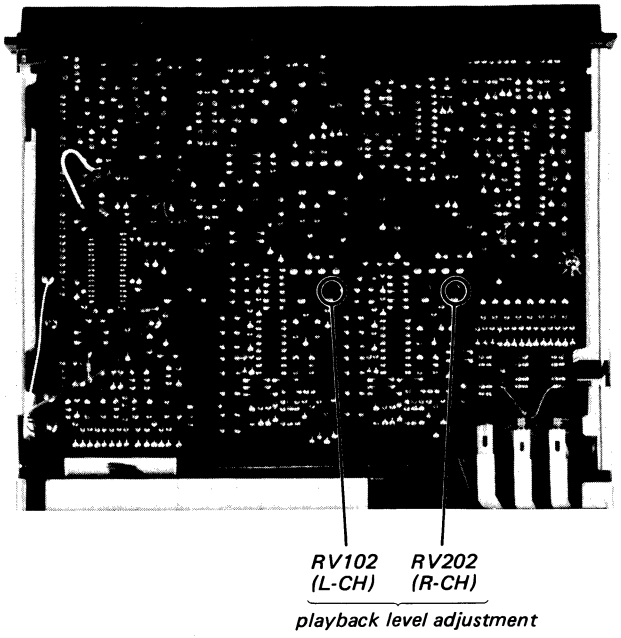
DOLBY NR switch:	OFF
TAPE switch:	NORMAL

Procedure:



Adjust RV102 (L-CH) and RV202 (R-CH) to obtain 0.16 – 0.14 V (–13.5 – –14.5 dB) on the VTVM.
Check that the output level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: CASSETTE board



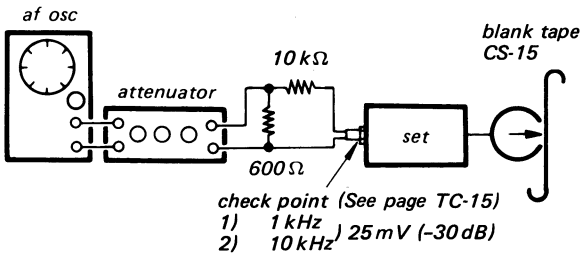
Record Bias Adjustment

Setting:

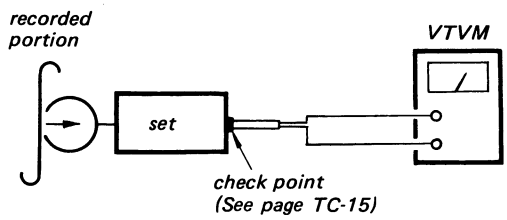
DOLBY NR switch:	OFF
TAPE switch:	NORMAL
ISS switch:	1

Procedure:

1. Mode: record

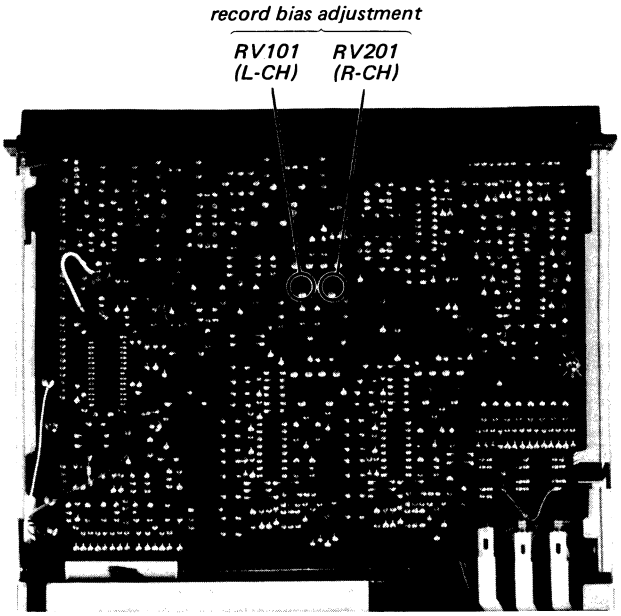


2. Mode: playback



Adjust RV101 (L-CH), RV201 (R-CH) so that the measurement point level of 10 kHz signal is 0 dB ±1 dB relative to that of 1 kHz.
If necessary, repeat the steps given above.

Adjustment Location: CASSETTE board



FH-3
TC-38
FH-3
TC-38

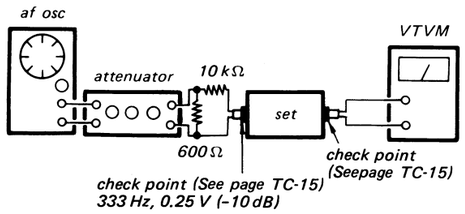
Record Level Adjustment

Setting:

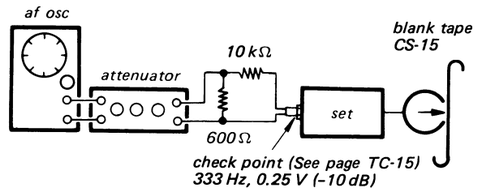
DOLBY NR switch:	OFF
TAPE switch:	NORMAL
ISS switch:	1

Procedure:

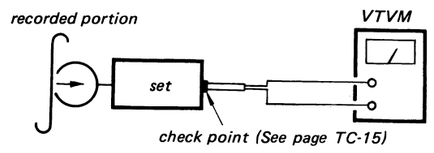
1. Mode: record



2. Mode: record

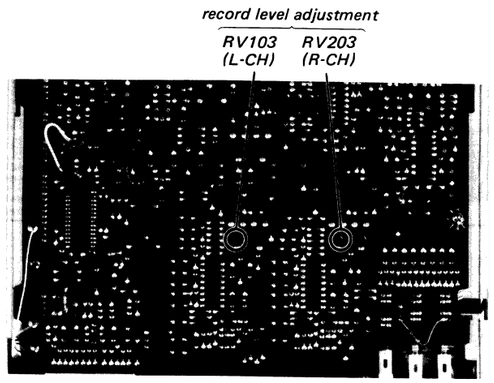


3. Mode: playback



4. Adjust RV103 (L-CH) and RV203 (R-CH) so that playback output level of step 3 is 0 ±0.5 dB relative to that of step 1.

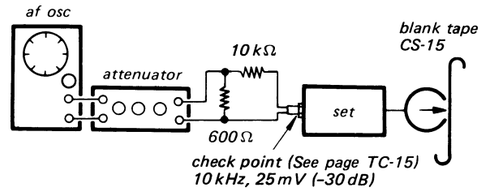
Adjustment Location: CASSETTE board



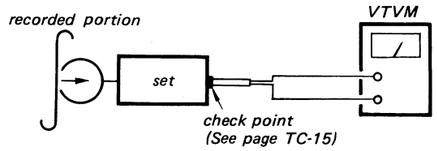
Reverse Playback Head Azimuth Adjustment

Procedure:

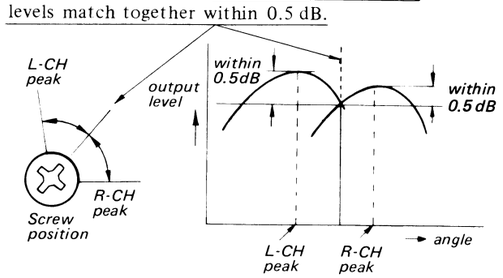
1. Mode: record



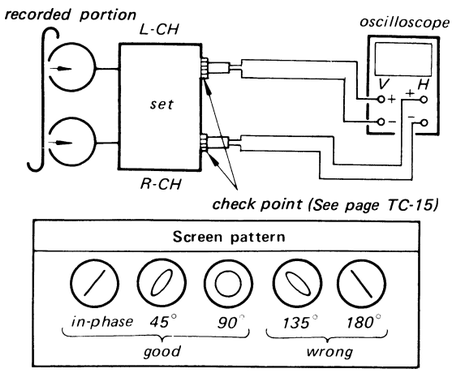
2. Mode: reverse playback
   Turn over the tape, and playback the tape recorded in step 1.



3. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

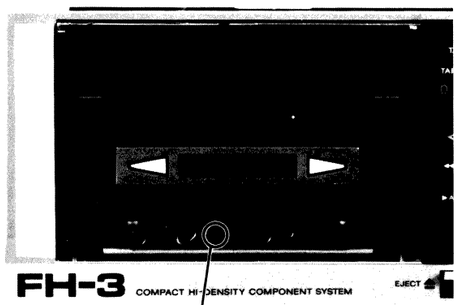


4. Phase Check
   Mode: reverse playback



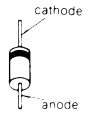
5. After adjustment, lock the screws with locking compound.

Adjustment Location:

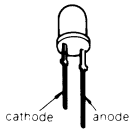


● Semiconductor Lead Layouts

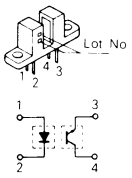
1S1555
1SS202-1
HZ6C2L
HZ7B2L
HZ11B2L



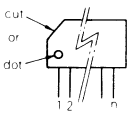
SLR-34DC5
SLR-34URC5



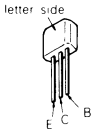
SPI201-20



LA3160

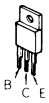


2SA1175
2SC2785



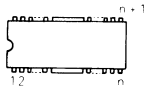
2SC2603

2SD1406



2SD774

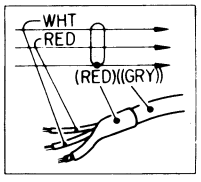
CX174A
LA3220



(Top view)

Note:

- Color code of sleeving over the end of the jacket.



- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- [ ]— : indicates side identified with part number.
- ▒▒ : B + pattern
- ▬▶▬ : signal path
- ▬▪▬▶ : L-CH signal path
- ▬▪▪▬▶ : R-CH signal path

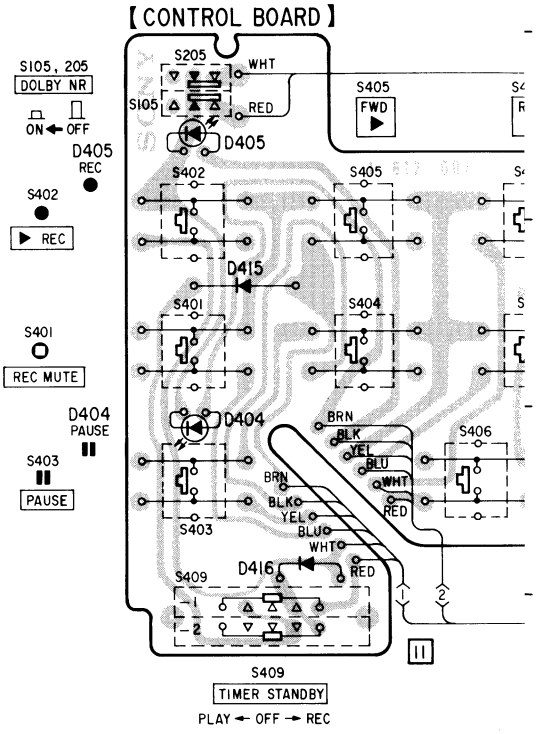
1	2	3	4

A
B
C
D
E
F
G
H
I
J

4-1. MOUNTING DIAGRAM

D

405
415
404
416



4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

A B C D E F G H I J

M1 MOTOR

【INTERRUPT BOARD】

【SWITCH BOARD】

S412 ACCIDENTAL ERASER PREVENTION OFF ON

S411 OPEN CLOSE

0V OR 5.1V ACCORDING TO THE POSITION OF TAKE-UP REEL TABLE

S404 AMS

S408 AMS

S406 AUTO PLAY

Q413

HE1 EF-250-36

242-3602 HRP101, 201

【HEAD TRANSLATION BOARD】

TYPE I 15.5VAC
TYPE II 17.3VAC
TYPE IV 29VAC

PLAYBACK INPUT

S410 DIRECTION MODE

S301 1SS

【CASSETTE BOARD】

TO TA-38

PLAYBACK OUTPUT

DRY BATTERY SIZE "D" IEC DESIGNATION R20 10PCS, 15V

PM2 FF/REVERSE/AMS

PM1 HEAD

PL2

PL1

(CHASSIS)

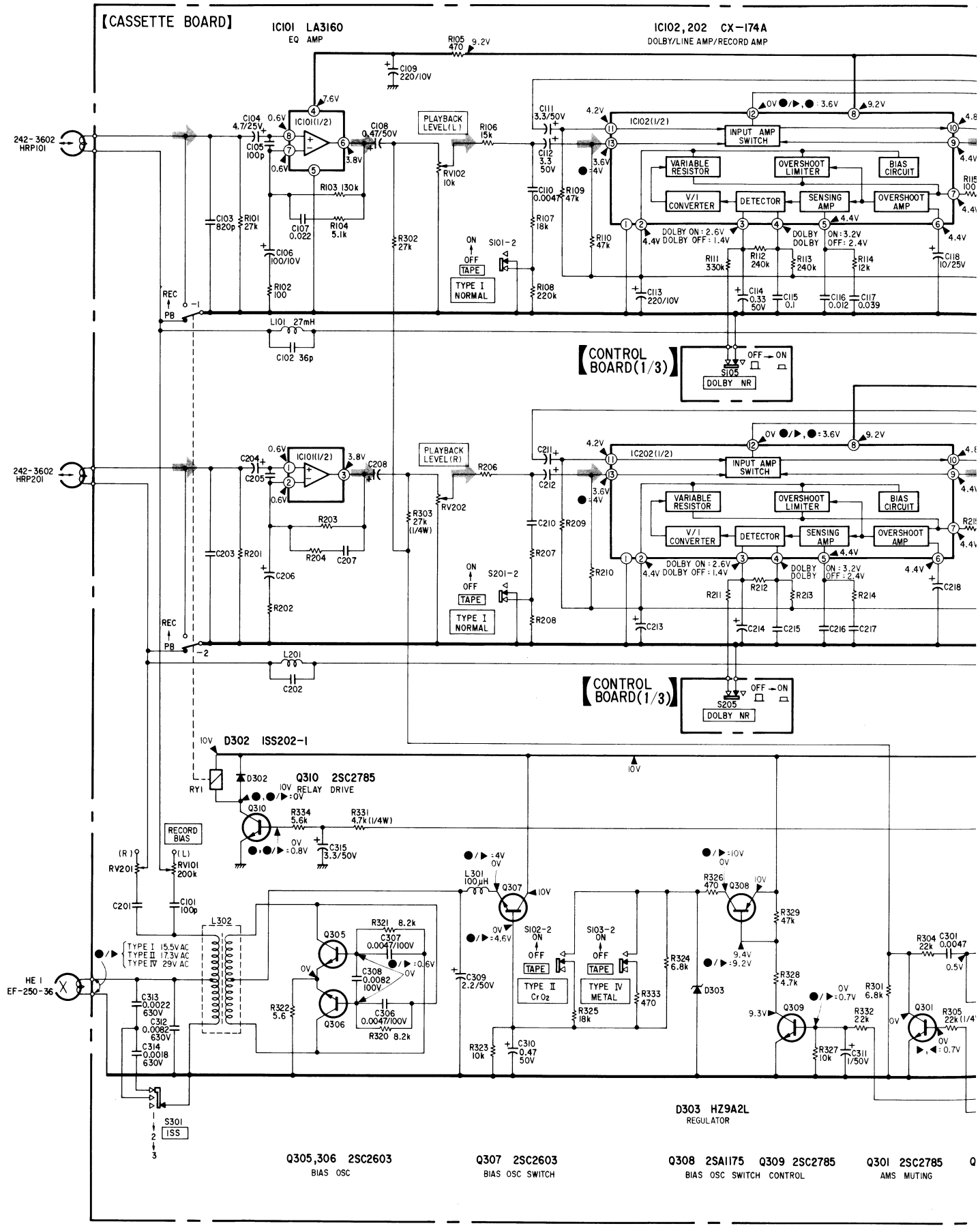
S101-1,-2 S201-1,-2 TAPE TYPE I NORMAL ON OFF

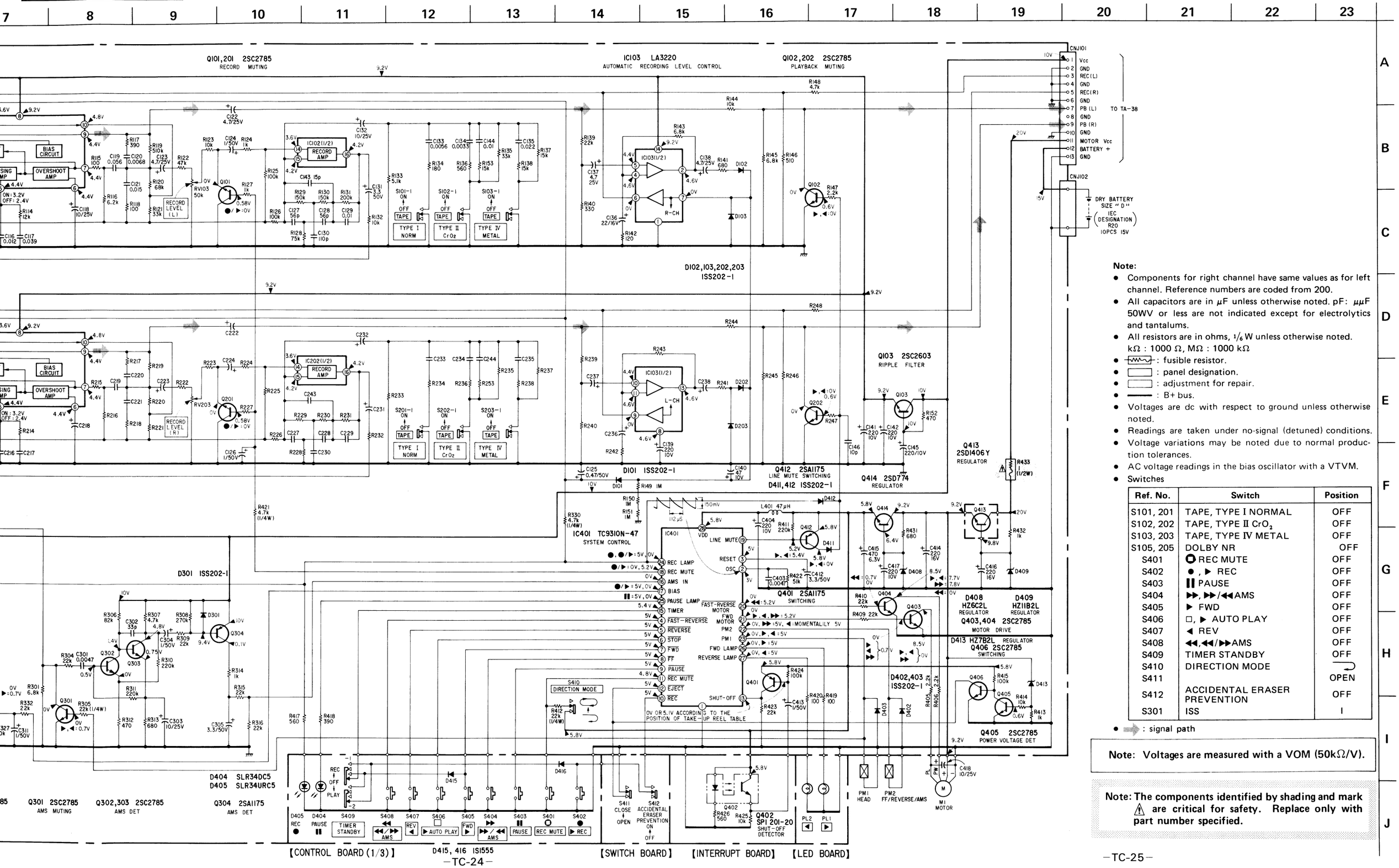
S102-1,-2 S202-2 TAPE TYPE II CrO2 ON OFF

S103-1,-2 S203-1 TAPE TYPE IV METAL ON OFF

IC, Q	D
413	
402	
	409
306 102, 202	413 408
404, 403, 414 IC101	302
405, 406, 305	203 103
412 310	102 411, 202
401 IC103	
307, 103	
	412
IC401	101
IC102, IC202	
101, 201	403, 402
301, 309, 308	
304, 302, 303	
	301, 303
IC, Q	D

4-2. SCHEMATIC DIAGRAM





Note:

- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/6 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ⏦: fusible resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions.
- Voltage variations may be noted due to normal production tolerances.
- AC voltage readings in the bias oscillator with a VTVM.
- Switches

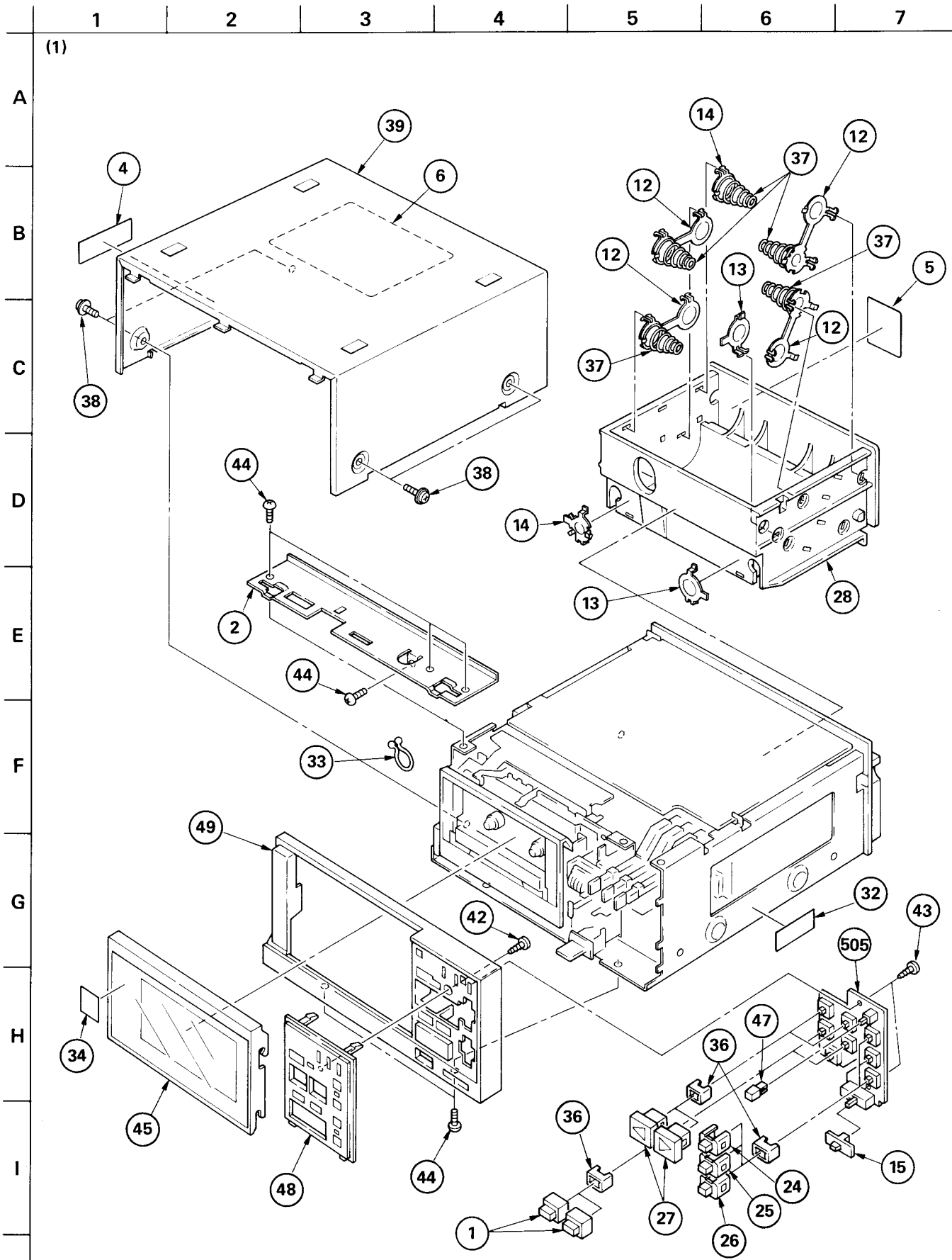
Ref. No.	Switch	Position
S101, 201	TAPE, TYPE I NORMAL	OFF
S102, 202	TAPE, TYPE II CrO_2	OFF
S103, 203	TAPE, TYPE IV METAL	OFF
S105, 205	DOLBY NR	OFF
S401	⭘ REC MUTE	OFF
S402	●, ▶ REC	OFF
S403	❙❙ PAUSE	OFF
S404	▶▶, ▶▶/◀◀ AMS	OFF
S405	▶ FWD	OFF
S406	□, ▶ AUTO PLAY	OFF
S407	◀ REV	OFF
S408	◀◀, ◀◀/▶▶ AMS	OFF
S409	TIMER STANDBY	OFF
S410	DIRECTION MODE	⮌
S411		OPEN
S412	ACCIDENTAL ERASER PREVENTION	OFF
S301	ISS	I

- ➡ : signal path

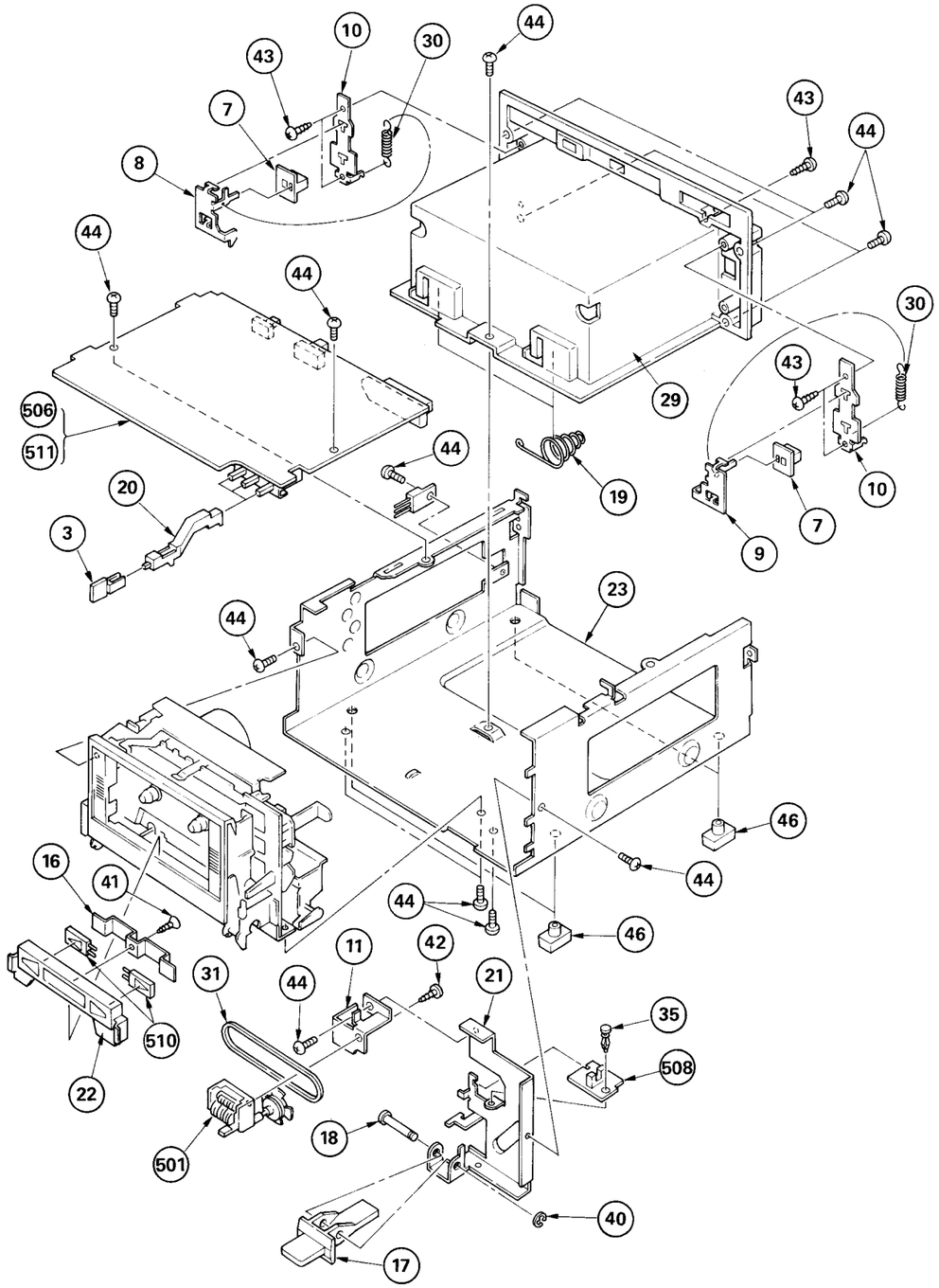
Note: Voltages are measured with a VOM (50kΩ/V).

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5
EXPLODED VIEWS AND PARTS LIST



(2)


43
10
30
44
7
8
43
44
44
44
506
511
29
30
43
19
10
7
9
20
3
44
23
46
44
16
41
11
42
21
31
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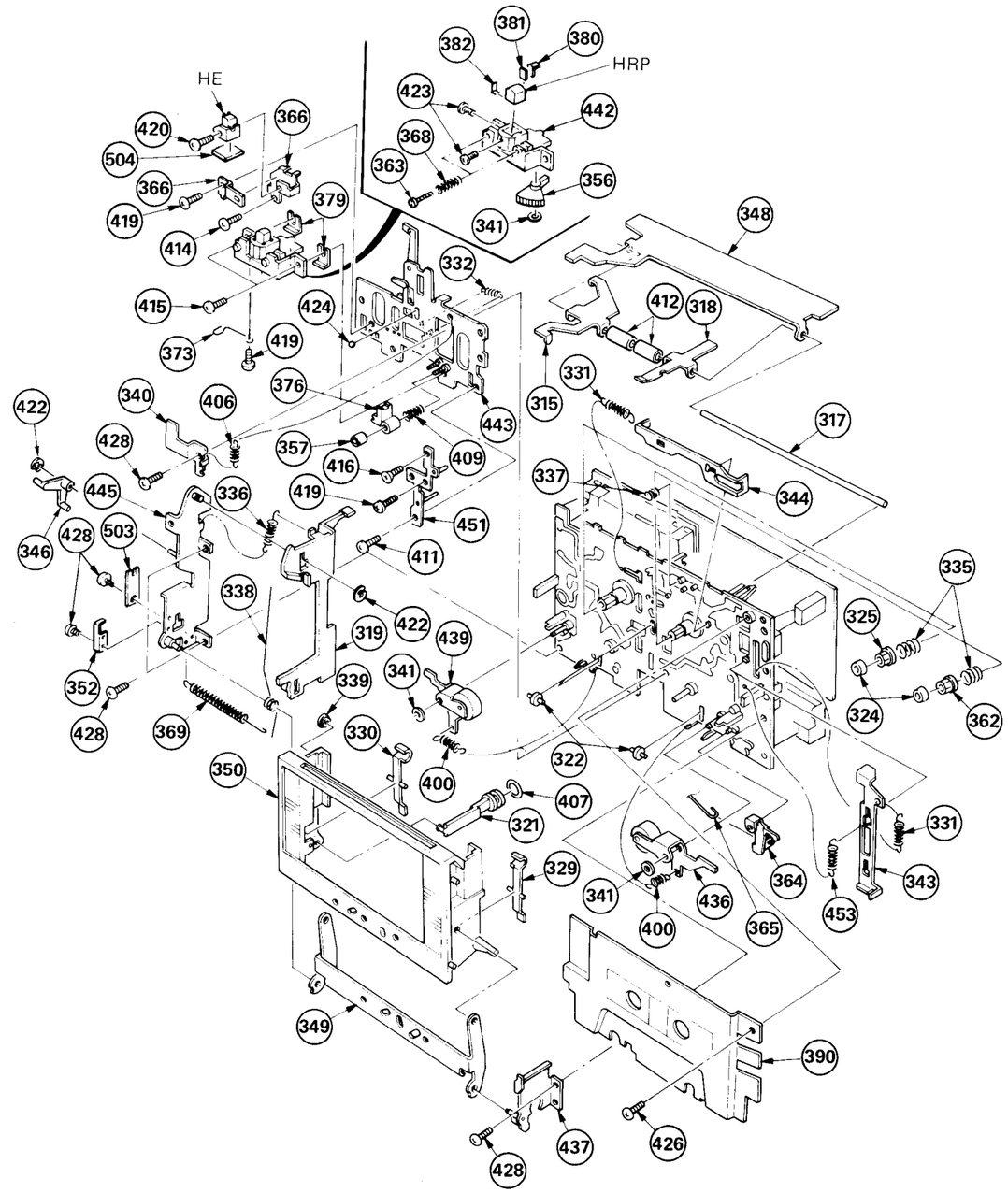
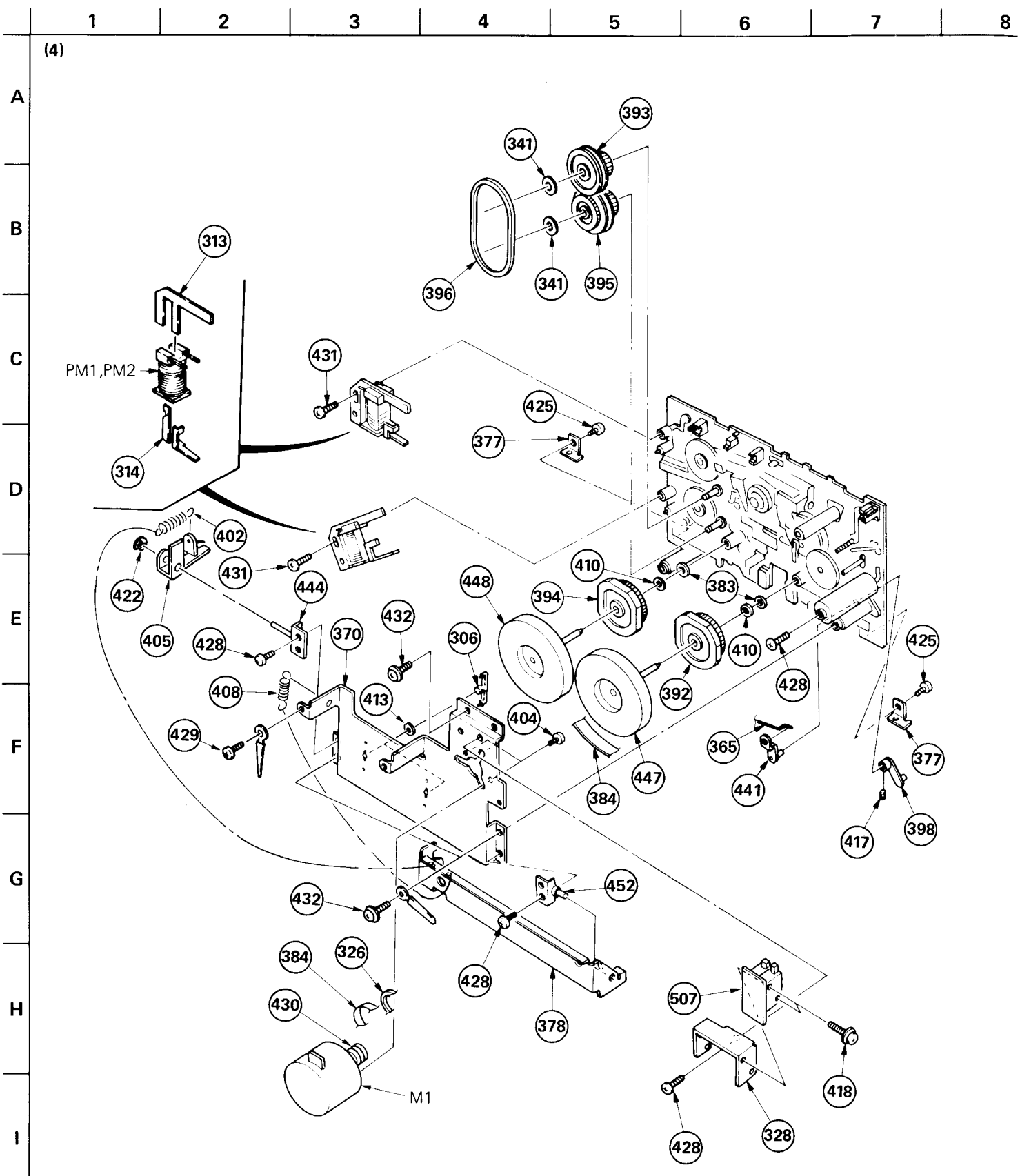
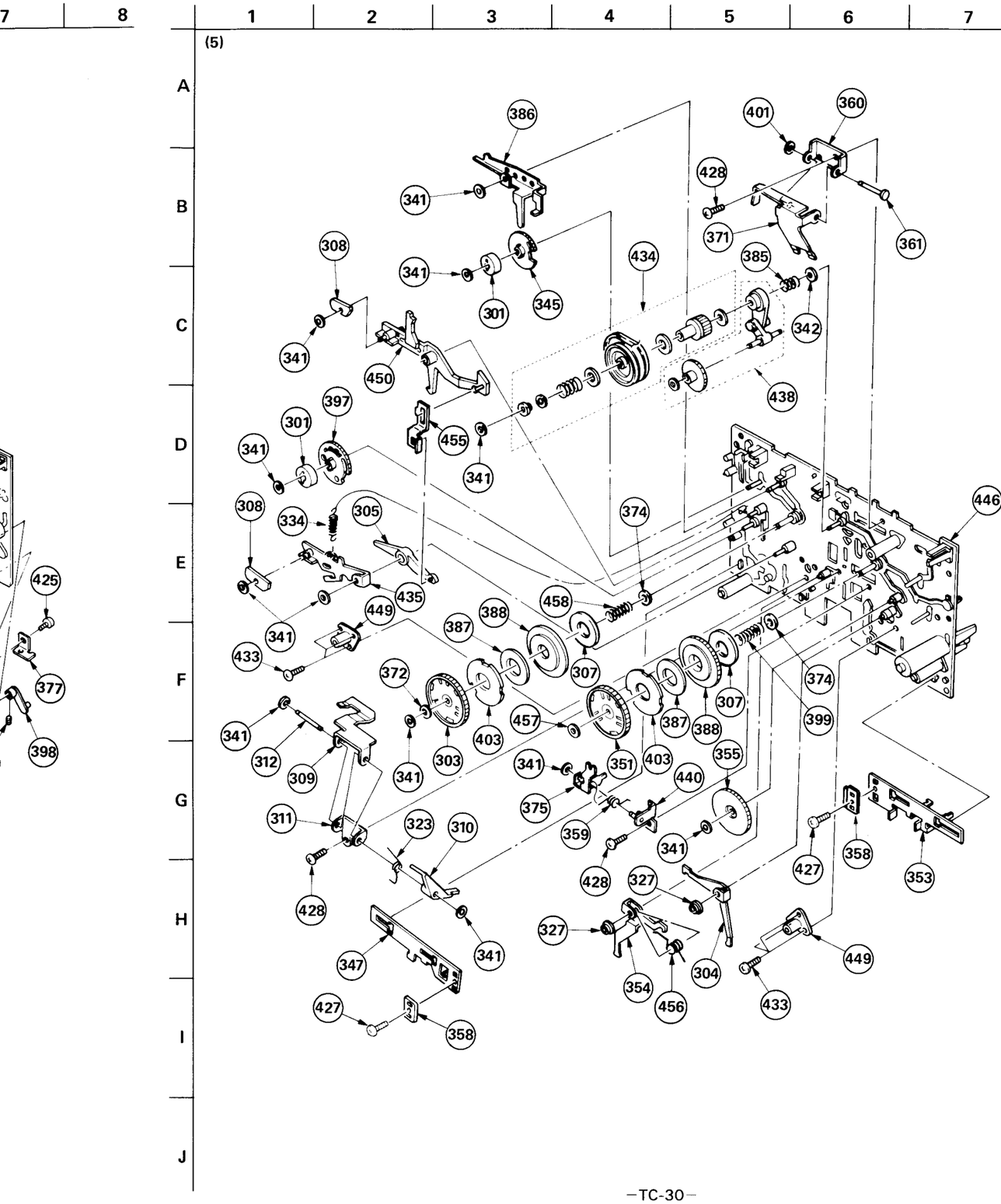
35
508
510
22
18
501
40
17

(3)


HE
HRP
381
380
382
423
442
420
366
504
368
363
356
366
419
379
341
414
348
332
415
424
412
318
373
419
315
331
376
422
340
406
443
317
428
357
409
416
445
336
419
451
337
344
346
428
503
411
335
338
422
319
439
325
352
339
341
324
362
428
369
330
322
400
350
407
321
331
329
341
436
364
343
400
365
453
349
390
437
426
428

(4)


393
341
341
396
395
313
PM1,PM2
314
431
425
377
422
402
431
444
405
428
370
432
448
394
410
383
410
306
408
413
404
392
428
425
429
365
441
377
447
384
417
398
452
432
384
326
428
430
378
507
418
428
328
M1



GENERAL SECTION

No.	Part No.	Description
1	3-309-102-11	(SILVER,BLACK)...BUTTON, REW-FF
1	3-309-102-21	(RED).....BUTTON, REW-FF
2 ♦	3-309-128-00	JOINT
3	3-309-139-21	(SILVER,RED)...KNOB (C)
3	3-309-139-31	(BLACK).....KNOB (C)
4	3-317-802-01	LABEL, MODEL NUMBER (W)
5	3-317-803-01	LABEL, BATTERY
6	3-317-804-01	LABEL, SERVICE
7	3-317-805-01	KNOB, RELEASE
8 ♦	3-317-806-01	PLATE (LEFT), LOCK
9 ♦	3-317-807-01	PLATE (RIGHT), LOCK
10 ♦	3-317-808-01	BRACKET, LOCK PLATE
11 ♦	3-317-809-01	BRACKET, COUNTER
12	3-317-810-01	TERMINAL BOARD (A)
13	3-317-811-01	TERMINAL BOARD (B)
14	3-317-812-01	TERMINAL BOARD (C)
15	3-317-813-01	(SILVER).....KNOB, STAND-BY
15	3-317-813-11	(BLACK,RED)...KNOB, STAND-BY
16 ♦	3-317-814-01	RETAINER, LED
17	3-317-815-01	(SILVER).....BUTTON, EJECT
17	3-317-815-11	(BLACK,RED)...BUTTON, EJECT
18 ♦	3-317-816-01	SHAFT, BUTTON, EJECT
19	3-317-817-01	SPRING
20 ♦	3-317-818-01	JOINT
21 ♦	3-317-820-01	PANEL, SUB
22	3-317-821-01	PLATE, ORNAMENTAL, HEAD
23 ♦	3-317-824-01	CHASSIS
24	3-317-825-01	BUTTON, REC
25	3-317-825-11	(SILVER,BLACK)...BUTTON, RECMUTE
25	3-317-825-31	(RED).....BUTTON, RECMUTE
26	3-317-825-21	BUTTON, PAUSE
27	3-317-828-01	(SILVER,BLACK)...BUTTON, FR
27	3-317-828-11	(RED).....BUTTON, FR
28	3-317-829-01	BOX, BATTERY
29	3-317-830-01	HOUSE, BATTERY
30	3-630-615-XX	SPRING, TENSION
31	3-569-738-00	BELT (53X1.0)
32	3-701-030-00	LABEL, SERIAL NUMBER
33	3-701-417-00	PURSE LOCK (11 DIA.)
34	3-703-709-11	STICKER, SONY SYMBOL (15)
35	4-812-134-00	RIVET NYLON, 3.5
36	4-881-725-00	RING (TACT), FLEXIBLE
37	4-884-910-00	SPRING

GENERAL SECTION

No.	Part No.	Description
38	4-886-821-01	(BLACK).....SCREW, M3 CASE
38	4-886-821-11	(SILVER,RED)...SCREW, M3 CASE
39	4-902-971-31	(SILVER)...CASE
39	4-902-971-41	(BLACK)....CASE
39	4-902-971-51	(RED)......CASE
40	7-624-106-04	STOP RING 3.0, TYPE -E
41	7-685-234-19	SCREW +KTP 2.6X8
42	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
43	7-685-646-11	SCREW +BVTP 3X8 TYPE2 N-S
44	7-685-871-01	SCREW +BVTT 3X6 (S)
45	X-3317-801-1	(SILVER)...LID ASSY, CASSETTE
45	X-3317-801-2	(BLACK)....LID ASSY, CASSETTE
45	X-3317-801-3	(RED)......LID ASSY, CASSETTE
46	X-4884-801-0	FOOT ASSY, RUBBER
47	X-4888-101-3	(SILVER,RED)...KNOB (6X7) ASSY, SQUARE
47	X-4888-101-4	(BLACK).....KNOB (6X7) ASSY, SQUARE
48	X-3317-802-1	(SILVER,BLACK)...PANEL(TC) ASSY, CASSETTE
48	X-3317-802-2	(RED).....PANEL(TC) ASSY, CASSETTE
49	X-3317-803-1	(SILVER)...PANEL (TC), ASSY
49	X-3317-803-2	(BLACK)....PANEL (TC), ASSY
49	X-3317-803-3	(RED).....PANEL (TC), ASSY

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

MECHANISM SECTION

No.	Part No.	Description
301	1-452-202-00	MAGNET
302	.....	
303	3-307-305-00	GEAR (T), REEL
304 ♦	3-307-306-00	LEVER, SELECT, REVERSE
305	3-307-307-00	LEVER, FWD
306	3-307-309-00	RETAINER (A), THRUST
307	3-307-313-00	PLATE, YOKE
308	3-307-315-00	ARBOR, MOVABLE
308	3-307-315-01	ARBOR, MOVABLE
309	3-307-319-00	RETAINER, TAKE-UP GEAR
310	3-307-328-00	LEVER, TAKE-UP SELECTION
311 ♦	3-307-329-00	PLATE, FULCRUM,SELECTION LEVER
312	3-307-330-00	PIN, FULCRUM PLATE
313	3-307-332-00	ARBOR, FIXED
314	3-307-333-00	ARBOR, TRIGGER
315 ♦	3-307-337-00	LEVER, REC DETECTION
316	.....	
317 ♦	3-307-339-00	SHAFT, DETECTION LEVER
318 ♦	3-307-344-00	LEVER, HALF RETAINER
319	3-307-345-00	SLIDER, EJECT
320	.....	
321	3-307-347-00	PISTON
322	3-307-348-00	ROLLER
323	3-307-355-00	SPRING
324	3-307-362-00	CAP, REEL
325	3-307-363-00	CLAW (N), REEL
326	3-307-366-00	BELT, FAST FORWARD
327	3-307-367-00	BUSHING, SELECT LEVER
328 ♦	3-307-370-00	BRACKET, SWITCH
329	3-307-371-00	SPRING (LEFT)
330	3-307-372-00	SPRING (RIGHT)
331	3-307-374-00	SPRING, TENSION
332	3-307-375-00	SPRING, TENSION
333	.....	
334	3-307-378-00	SPRING, TENSION
335	3-307-380-00	SPRING, COMPRESSION
336	3-531-541-00	SPRING, TENSION
337	3-307-382-00	SPRING
338	3-307-383-00	SPRING
339	3-307-390-00	BUSHING, LOADING SPRING
340	3-307-391-00	SPRING
341	.....	
342	3-307-395-00	RETAINER, SPRING
343	3-307-397-00	SLIDER, PAUSE
344 ♦	3-307-399-00	SLIDER, MODE
345	3-307-401-00	GEAR, FF CAM

MECHANISM SECTION

No.	Part No.	Description
346	3-307-406-00	LEVER, EJECT
347 ♦	3-307-403-00	SLIDER, FWD
348 ♦	3-307-404-00	RETAINER, DETECTION SWITCH
349 ♦	3-307-405-00	PLATE, FULCRUM,CASSETTE HOLDER
350	3-307-407-31	HOLDER, CASSETTE
351	3-307-412-00	GEAR, TAKE-UP REEL
352	3-307-416-00	STOPPER, LOADING
353 ♦	3-307-420-00	SLIDER, REVERSE
354 ♦	3-307-421-00	LEVER (R), FWD SELECTION
355	3-307-423-00	GEAR (S), DRIVING
356	3-307-427-00	GEAR, HEAD, ROTARY
357	3-307-435-00	NUT, ADJUSTMENT, TAPE GUIDE
358 ♦	3-307-437-00	BLOCK, HEAD SELECTION
359	3-307-441-00	SPRING
360 ♦	3-307-443-00	BRACKET, RETAINER, SUPPLY GEAR
361 ♦	3-307-445-00	SHAFT, RETAINER, SUPPLY GEAR
362	3-307-447-00	CLAW (R), REEL
363	3-307-448-00	SCREW, ADJUSTMENT, AZIMUTH
364 ♦	3-307-449-00	LEVER (R), PAUSE
365 ♦	3-307-450-00	ROD, PULL, PAUSE
366	3-307-457-00	SPRING
367	3-307-458-00	PLATE (L), ADJUSTMENT, HEAD
368	3-307-460-00	SPRING, COMPRESSION
369	3-307-461-00	SPRING, TENSION
370 ♦	3-307-462-00	RETAINER (R), THRUST
371 ♦	3-307-464-00	RETAINER, SUPPLY GEAR
372	3-307-465-00	RETAINER, T SIDE
373 ♦	3-307-466-00	CLAMP
374 ♦	3-307-467-00	RETAINER, SPRING
375	3-307-469-00	LEVER, SELECTION, SUPPLY
376	3-307-470-00	GUIDE (R), TAPE
377 ♦	3-307-472-00	BRACKET, MD
378 ♦	3-307-474-00	LEVER (R2), EJECT
379	3-307-477-01	SEAM (A), HEAD ADJUSTMENT (t=0.1)
379	3-307-477-11	SEAM (A), HEAD ADJUSTMENT (t=0.2)
379	3-307-477-21	SEAM (A), HEAD ADJUSTMENT (t=0.3)
379	3-307-477-31	SEAM (A), HEAD ADJUSTMENT (t=0.4)
379	3-307-477-41	SEAM (A), HEAD ADJUSTMENT (t=0.5)
380	3-307-479-01	SEAM (B), HEAD ADJUSTMENT (t=0.1)
380	3-307-479-11	SEAM (B), HEAD ADJUSTMENT (t=0.2)
380	3-307-479-21	SEAM (B), HEAD ADJUSTMENT (t=0.3)
380	3-307-479-31	SEAM (B), HEAD ADJUSTMENT (t=0.4)
381	3-307-480-00	SEAM, HEAD
382	3-307-481-00	BASE, HEAD
383	3-307-482-00	WASHER, LUMILER
384	3-307-483-00	BELT (R), CAPSTAN
385	3-312-452-00	SPRING, COMPRESSION

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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

MECHANISM SECTION

No.	Part No.	Description
386 ♦	3-307-490-04	LEVER, FF
387	3-307-493-01	SPACER (t=0.1)
387	3-307-493-11	SPACER (t=0.15)
387	3-307-493-21	SPACER (t=0.2)
387	3-307-493-31	SPACER (t=0.25)
387	3-307-493-41	SPACER (t=0.3)
387	3-307-493-51	SPACER (t=0.35)
388	3-307-953-00	MAGNET, REEL TABLE
389	.....	
390	3-307-533-11	PLATE, ORNAMENTAL, MD
391	.....	
392 ♦	3-312-403-00	GEAR (S), PINION
393	3-312-405-00	PULLEY, DRIVING
394	3-312-406-00	GEAR (T), PINION
395	3-312-408-00	GEAR (B), CONVERSION
396	3-312-409-00	BELT, DRIVING
397	3-312-412-00	GEAR (B), CAM, FWD
398 ♦	3-312-428-00	ARM (B), PUASE
399	3-307-471-31	SPRING, COMPRESSION
400	3-312-432-00	SPRING, TENSION
401	3-312-434-00	WASHER, SLIT
402	.....	
403	3-561-827-00	PLATE (A), HYSTERESIS
404	7-621-775-00	SCREW +B 2.6X3
405 ♦	3-312-454-01	LEVER, EJECT
406	3-312-451-00	SPRING, TENSION
407	3-575-392-00	RING, PISTON
408	3-578-393-00	SPRING, TENSION
409	3-644-718-00	SPRING, COMPRESSION
410	3-701-438-11	WASHER, 2.5
411	3-701-467-00	SCREW, LOCK
412	4-855-006-01	SPACER (3X12)
413	3-701-442-21	WASHER, 4.5
414	7-621-255-20	SCREW +P 2X4
415	7-621-770-87	SCREW +P 2.6X5
416	7-621-555-35	SCREW +K 2X5
417	7-621-733-08	SET-SCT, HEX 2X4 FLAT POINT
418	7-621-760-05	+PSW, 2.6X16
419	7-621-772-00	SCREW +B 2X3
420	7-621-772-40	SCREW +B 2X8
421	.....	
422	7-624-105-04	STOP RING 2.3, TYPE -E
423	7-627-552-07	SCREW, PRECISION +P 1.7X2.5
424	7-671-111-11	STEEL, BOUL 1.5MM
425	7-682-546-04	SCREW +BVTT 3X5 (S)
426	7-685-104-29	SCREW +P 2X6 TYPE2 SLIT

(t=0.1)
(t=0.2)
(t=0.3)
(t=0.4)
(t=0.5)

(t=0.1)
(t=0.2)
(t=0.3)
(t=0.4)

MECHANISM SECTION

No.	Part No.	Description
427	7-685-781-04	SCREW +BVTT 2X4 (S)
428	7-685-790-04	SCREW +BVTT 2.6X4 (S)
429	7-685-871-01	SCREW +BVTT 3X6 (S)
430	X-3307-329-1	PULLEY (R), MOTOR
431	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
432	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
433	7-687-701-39	SCREW, TOTSU BTT 2.6X4
434	A-2142-022-A	PULLEY ASSY, FR
435 ♦	X-3307-305-0	LEVER ASSY, FWD LOCK
436	X-3307-307-6	PINCH ROLLER (N) ASSY
437 ♦	X-3307-310-0	PLATE (RIGHT) ASSY, SIDE
438	X-3307-353-1	LEVER ASSY, FR
439	X-3307-316-3	PINCH ROLLER (R) ASSY
440 ♦	X-3307-317-0	PLATE ASSY, FULCRUM, LEVER
441 ♦	X-3307-319-0	ARM (A) ASSY, PAUSE
442	X-3307-321-0	HOLDER ASSY, HEAD
443	X-3307-323-0	CHASSIS (R) ASSY, HEAD
444 ♦	X-3307-354-1	FULCRUM ASSY, EJECT
445 ♦	X-3307-309-0	PLATE (LEFT) ASSY, SIDE
446	X-3307-331-1	CHASSIS ASSY, MACHANISM
447	X-3307-336-2	FLYWHEEL (RS) ASSY
448	X-3307-337-2	FLYWHEEL (RT) ASSY
449	X-3307-338-0	BEARING ASSY, CAPSTAN
450	X-3307-348-0	LEVER ASSY, FF LOCK
451	X-3307-920-0	PLATE ASSY, ADJUSTMENT
452 ♦	X-3307-326-0	FULCRUM (R2) ASSY, EJECT
453	3-312-448-00	SPRING, TENSION
455 ♦	3-307-487-00	STOPPER, FR
456	3-312-442-00	SPRING
457	7-623-922-01	WASHER 2.0, NYLONE
458	3-312-430-00	SPRING, COMPRESSION

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-548-563-71	COUNTER, TAPE
502 ♦	1-562-251-00	SOCKET, CONNECTOR 6P
503 ♦	1-608-170-00	PC BOARD, HEAD TRANSLATION
504	1-611-992-11	PC BOARD, HEAD ERASE
505 ♦	1-612-007-11	PC BOARD, CONTROL
506 ♦	1-612-008-11	PC BOARD, CASSETTE
507 ♦	1-612-009-11	PC BOARD, SWITCH
508 ♦	1-612-010-11	PC BOARD, INTERRUPT
509	.....	
510	1-806-779-11	LAMP, LED
511 ♦	A-2010-221-A	MOUNTED PCB, CASSETTE

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SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C101	1-102-975-00	CERAMIC	100PF	10%	50V
C102	1-102-964-00	CERAMIC	36PF	5%	50V
C103	1-102-117-00	CERAMIC	820PF	10%	50V
C104	1-123-328-00	ELECT	4.7MF	20%	25V
C105	1-102-975-00	CERAMIC	100PF	10%	50V
C106	1-123-307-00	ELECT	100MF	20%	10V
C107	1-130-487-00	MYLAR	0.022MF	5%	50V
C108	1-123-379-00	ELECT	0.47MF	20%	50V
C109	1-123-308-00	ELECT	220MF	20%	10V
C110	1-130-479-00	MYLAR	0.0047MF	5%	50V
C111	1-123-382-00	ELECT	3.3MF	20%	50V
C112	1-123-382-00	ELECT	3.3MF	20%	50V
C113	1-123-308-00	ELECT	220MF	20%	10V
C114	1-123-609-00	ELECT	0.33MF	20%	50V
C115	1-130-632-00	FILM	0.1MF	5%	50V
C116	1-130-484-00	MYLAR	0.012MF	5%	50V
C117	1-130-627-00	MYLAR	0.039MF	5%	50V
C118	1-123-356-00	ELECT	10MF	20%	25V
C119	1-130-492-00	MYLAR	0.056MF	5%	50V
C120	1-130-481-00	MYLAR	0.0068MF	5%	50V
C121	1-130-485-00	MYLAR	0.015MF	5%	50V
C122	1-123-328-00	ELECT	4.7MF	20%	25V
C123	1-123-328-00	ELECT	4.7MF	20%	25V
C124	1-123-380-00	ELECT	1MF	20%	50V
C125	1-123-379-00	ELECT	0.47MF	20%	50V
C126	1-123-380-00	ELECT	1MF	20%	50V
C127	1-162-031-00	CERAMIC	56PF	5%	50V
C128	1-162-031-00	CERAMIC	56PF	5%	50V
C129	1-130-483-00	MYLAR	0.01MF	5%	50V
C130	1-161-347-00	CERAMIC	110PF	5%	50V
C131	1-123-382-00	ELECT	3.3MF	20%	50V
C132	1-123-356-00	ELECT	10MF	20%	25V
C133	1-130-480-00	MYLAR	0.0056MF	5%	50V
C134	1-130-477-00	MYLAR	0.0033MF	5%	50V
C135	1-130-487-00	MYLAR	0.022MF	5%	50V
C136	1-123-330-00	ELECT	22MF	20%	16V
C137	1-123-328-00	ELECT	4.7MF	20%	25V
C138	1-123-328-00	ELECT	4.7MF	20%	25V
C139	1-123-308-00	ELECT	220MF	20%	10V
C140	1-123-306-00	ELECT	47MF	20%	10V
C141	1-123-308-00	ELECT	220MF	20%	10V
C142	1-123-308-00	ELECT	220MF	20%	10V
C143	1-162-017-00	CERAMIC	15PF	5%	50V
C144	1-130-483-00	MYLAR	0.01MF	5%	50V
C145	1-123-308-00	ELECT	220MF	20%	10V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C301	1-130-479-00	MYLAR	0.0047MF	5%	50V
C302	1-162-025-00	CERAMIC	33PF	5%	50V
C303	1-123-356-00	ELECT	10MF	20%	25V
C304	1-123-380-00	ELECT	1MF	20%	50V
C305	1-123-382-00	ELECT	3.3MF	20%	50V
C306	1-106-188-00	MYLAR	0.0047MF	5%	100V
C307	1-106-188-00	MYLAR	0.0047MF	5%	100V
C308	1-106-194-00	MYLAR	0.0082MF	5%	100V
C309	1-123-381-00	ELECT	2.2MF	20%	50V
C310	1-123-379-00	ELECT	0.47MF	20%	50V
C311	1-123-380-00	ELECT	1MF	20%	50V
C312	1-129-713-00	FILM	0.0082MF	10%	630V
C313	1-129-706-00	FILM	0.0022MF	10%	630V
C314	1-129-705-00	FILM	0.0018MF	10%	630V
C315	1-123-382-00	ELECT	3.3MF	20%	50V
C403	1-130-479-00	MYLAR	0.0047MF	5%	50V
C404	1-123-308-00	ELECT	220MF	20%	10V
C412	1-123-382-00	ELECT	3.3MF	20%	50V
C413	1-123-380-00	ELECT	1MF	20%	50V
C414	1-123-321-00	ELECT	220MF	20%	16V
C415	1-123-298-00	ELECT	470MF	20%	6.3V
C416	1-123-321-00	ELECT	220MF	20%	16V
CNJ101	1-562-068-00	SOCKET, CONNECTOR 13P			
♦CNJ102	1-560-060-00	PIN, CONNECTOR 2P			
♦CNJ103	1-560-062-00	PIN, CONNECTOR 4P			
♦CNJ104	1-560-062-00	PIN, CONNECTOR 4P			
♦CNJ105	1-560-061-00	PIN, CONNECTOR 3P			
♦CNJ106	1-560-062-00	PIN, CONNECTOR 4P			
♦CNJ107	1-560-230-00	PIN, CONNECTOR 12P			
♦CNJ108	1-560-060-00	PIN, CONNECTOR 2P			
♦CNJ109	1-560-060-00	PIN, CONNECTOR 2P			
♦CNJ110	1-560-064-00	PIN, CONNECTOR 6P			
D101	8-719-107-94	DIODE 1SS202-1			
D102	8-719-107-94	DIODE 1SS202-1			
D103	8-719-107-94	DIODE 1SS202-1			
D202	8-719-107-94	DIODE 1SS202-1			
D203	8-719-107-94	DIODE 1SS202-1			
D301	8-719-107-94	DIODE 1SS202-1			
D302	8-719-107-94	DIODE 1SS202-1			
D303	8-719-910-92	DIODE HZ9A2L			
D402	8-719-107-94	DIODE 1SS202-1			
D403	8-719-107-94	DIODE 1SS202-1			
D404	8-719-902-78	DIODE SLR-34DC5			
D405	8-719-934-05	DIODE SLR-34URC5			
D408	8-719-910-68	DIODE HZ6C2L			
D409	8-719-911-12	DIODE HZ11B2L			
D411	8-719-107-94	DIODE 1SS202-1			

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
D412	8-719-107-94	DIODE 1SS202-1
D413	8-719-910-75	DIODE HZ7B2L
D415	8-719-815-55	DIODE 1S1555
D416	8-719-815-55	DIODE 1S1555
HE1	8-825-559-10	HEAD, ERAZE (EF-250-36)
HRP101	8-825-548-30	HEAD, RP
HRP201	8-825-548-30	HEAD, RP
IC101	8-759-800-36	IC LA3160
IC102	8-759-300-74	IC CX174A
IC103	8-759-800-92	IC LA3220
IC202	8-759-300-74	IC CX174A
L101	1-408-262-00	MICRO INDUCTOR 27MMH
L201	1-408-262-00	MICRO INDUCTOR 27MMH
L301	1-407-169-XX	MICRO INDUCTOR 100UH
L302	1-433-281-11	TRANSFORMER, BIAS OSCILLATOR
L401	1-407-165-XX	MICRO INDUCTOR 47UH
M1	1-541-201-00	MOTOR
PM1	1-454-316-00	SOLENOID, PLUNGER
PM2	1-454-316-00	SOLENOID, PLUNGER
Q101	8-729-178-54	TRANSISTOR 2SC2785
Q102	8-729-178-54	TRANSISTOR 2SC2785
Q103	8-729-606-32	TRANSISTOR 2SC2603
Q201	8-729-178-54	TRANSISTOR 2SC2785
Q202	8-729-178-54	TRANSISTOR 2SC2785
Q301	8-729-178-54	TRANSISTOR 2SC2785
Q302	8-729-178-54	TRANSISTOR 2SC2785
Q303	8-729-178-54	TRANSISTOR 2SC2785
Q304	8-729-117-54	TRANSISTOR 2SA1175
Q305	8-729-606-32	TRANSISTOR 2SC2603
Q306	8-729-606-32	TRANSISTOR 2SC2603
Q307	8-729-606-32	TRANSISTOR 2SC2603
Q308	8-729-117-54	TRANSISTOR 2SA1175
Q309	8-729-178-54	TRANSISTOR 2SC2785
Q310	8-729-178-54	TRANSISTOR 2SC2785
Q401	8-729-117-54	TRANSISTOR 2SA1175
Q402	8-719-902-90	PHOTO INTERRUPTOR SPI201-20
Q403	8-729-178-54	TRANSISTOR 2SC2785
Q404	8-729-178-54	TRANSISTOR 2SC2785
Q405	8-729-178-54	TRANSISTOR 2SC2785
Q406	8-729-178-54	TRANSISTOR 2SC2785
Q412	8-729-117-54	TRANSISTOR 2SA1175
Q413	8-729-201-78	TRANSISTOR 2SD1406
Q414	8-729-177-43	TRANSISTOR 2SD774
R101	1-247-865-00	CARBON 27K 5% 1/6W
R102	1-247-807-00	CARBON 100 5% 1/6W
R103	1-247-882-00	CARBON 130K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R104	1-247-848-00	CARBON 5.1K 5% 1/6W
R105	1-247-823-00	CARBON 470 5% 1/6W
R106	1-247-859-00	CARBON 15K 5% 1/6W
R107	1-247-861-00	CARBON 18K 5% 1/6W
R108	1-247-887-00	CARBON 220K 5% 1/6W
R109	1-247-871-00	CARBON 47K 5% 1/6W
R110	1-247-871-00	CARBON 47K 5% 1/6W
R111	1-247-891-00	CARBON 330K 5% 1/6W
R112	1-247-888-00	CARBON 240K 5% 1/6W
R113	1-247-888-00	CARBON 240K 5% 1/6W
R114	1-247-857-00	CARBON 12K 5% 1/6W
R115	1-247-807-00	CARBON 100 5% 1/6W
R116	1-247-850-00	CARBON 6.2K 5% 1/6W
R117	1-247-821-00	CARBON 390 5% 1/6W
R118	1-247-807-00	CARBON 100 5% 1/6W
R119	1-247-896-00	CARBON 510K 5% 1/6W
R120	1-247-875-00	CARBON 68K 5% 1/6W
R121	1-247-867-00	CARBON 33K 5% 1/6W
R122	1-247-871-00	CARBON 47K 5% 1/6W
R123	1-247-855-00	CARBON 10K 5% 1/6W
R124	1-247-831-00	CARBON 1K 5% 1/6W
R125	1-247-879-00	CARBON 100K 5% 1/6W
R126	1-247-879-00	CARBON 100K 5% 1/6W
R127	1-247-831-00	CARBON 1K 5% 1/6W
R128	1-247-876-00	CARBON 75K 5% 1/6W
R129	1-247-883-00	CARBON 150K 5% 1/6W
R130	1-247-883-00	CARBON 150K 5% 1/6W
R131	1-247-886-00	CARBON 200K 5% 1/6W
R132	1-247-855-00	CARBON 10K 5% 1/6W
R133	1-247-848-00	CARBON 5.1K 5% 1/6W
R134	1-247-813-00	CARBON 180 5% 1/6W
R135	1-247-867-00	CARBON 33K 5% 1/6W
R136	1-247-825-00	CARBON 560 5% 1/6W
R137	1-247-859-00	CARBON 15K 5% 1/6W
R138	1-247-859-00	CARBON 15K 5% 1/6W
R139	1-247-863-00	CARBON 22K 5% 1/6W
R140	1-247-819-00	CARBON 330 5% 1/6W
R141	1-247-827-00	CARBON 680 5% 1/6W
R142	1-247-809-00	CARBON 120 5% 1/6W
R143	1-247-851-00	CARBON 6.8K 5% 1/6W
R144	1-247-855-00	CARBON 10K 5% 1/6W
R145	1-247-851-00	CARBON 6.8K 5% 1/6W
R146	1-247-824-00	CARBON 510 5% 1/6W
R147	1-247-839-00	CARBON 2.2K 5% 1/6W
R148	1-247-847-00	CARBON 4.7K 5% 1/6W

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R149	1-247-903-00	CARBON	1M	5%	1/6W
R150	1-247-903-00	CARBON	1M	5%	1/6W
R151	1-247-903-00	CARBON	1M	5%	1/6W
R152	1-247-823-00	CARBON	470	5%	1/6W
R153	1-247-859-00	CARBON	15K	5%	1/6W
R301	1-247-851-00	CARBON	6.8K	5%	1/6W
R302	1-247-865-00	CARBON	27K	5%	1/6W
R303	1-247-165-00	CARBON	27K	5%	1/4W
R304	1-247-863-00	CARBON	22K	5%	1/6W
R305	1-246-505-00	CARBON	22K	5%	1/4W
R306	1-247-877-00	CARBON	82K	5%	1/6W
R307	1-247-847-00	CARBON	4.7K	5%	1/6W
R308	1-247-889-00	CARBON	270K	5%	1/6W
R309	1-247-863-00	CARBON	22K	5%	1/6W
R310	1-247-887-00	CARBON	220K	5%	1/6W
R311	1-247-887-00	CARBON	220K	5%	1/6W
R312	1-247-823-00	CARBON	470	5%	1/6W
R313	1-247-827-00	CARBON	680	5%	1/6W
R314	1-247-831-00	CARBON	1K	5%	1/6W
R315	1-247-863-00	CARBON	22K	5%	1/6W
R316	1-247-863-00	CARBON	22K	5%	1/6W
R320	1-247-853-00	CARBON	8.2K	5%	1/6W
R321	1-247-853-00	CARBON	8.2K	5%	1/6W
R322	1-247-777-00	CARBON	5.6	5%	1/6W
R323	1-247-855-00	CARBON	10K	5%	1/6W
R324	1-247-851-00	CARBON	6.8K	5%	1/6W
R325	1-247-861-00	CARBON	18K	5%	1/6W
R326	1-247-823-00	CARBON	470	5%	1/6W
R327	1-247-855-00	CARBON	10K	5%	1/6W
R328	1-247-847-00	CARBON	4.7K	5%	1/6W
R329	1-247-871-00	CARBON	47K	5%	1/6W
R330	1-247-147-00	CARBON	4.7K	5%	1/4W
R331	1-247-147-00	CARBON	4.7K	5%	1/4W
R332	1-247-863-00	CARBON	22K	5%	1/6W
R333	1-247-823-00	CARBON	470	5%	1/6W
R334	1-247-849-00	CARBON	5.6K	5%	1/6W
R405	1-247-839-00	CARBON	2.2K	5%	1/6W
R406	1-247-839-00	CARBON	2.2K	5%	1/6W
R409	1-247-863-00	CARBON	22K	5%	1/6W
R410	1-247-863-00	CARBON	22K	5%	1/6W
R411	1-247-887-00	CARBON	220K	5%	1/6W
R412	1-246-505-00	CARBON	22K	5%	1/4W
R413	1-247-831-00	CARBON	1K	5%	1/6W
R414	1-247-855-00	CARBON	10K	5%	1/6W
R415	1-247-879-00	CARBON	100K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R417	1-247-825-00	CARBON	560	5%	1/6W
R418	1-247-821-00	CARBON	390	5%	1/6W
R419	1-247-807-00	CARBON	100	5%	1/6W
R420	1-247-807-00	CARBON	100	5%	1/6W
R421	1-247-147-00	CARBON	4.7K	5%	1/4W
R422	1-247-872-00	CARBON	51K	5%	1/6W
R423	1-247-863-00	CARBON	22K	5%	1/6W
R424	1-247-879-00	CARBON	100K	5%	1/6W
R425	1-247-855-00	CARBON	10K	5%	1/6W
R426	1-247-825-00	CARBON	560	5%	1/6W
R431	1-247-827-00	CARBON	680	5%	1/6W
R432	1-247-831-00	CARBON	1K	5%	1/6W
R433 ⚠	1-212-934-00	FUSIBLE	1	5%	1/2W F
RV101	1-226-240-00	RES, ADJ, CARBON 200K			
RV102	1-226-236-00	RES, ADJ, CARBON 10K			
RV103	1-226-238-00	RES, ADJ, CARBON 50K			
RV201	1-226-240-00	RES, ADJ, CARBON 200K			
RV202	1-226-236-00	RES, ADJ, CARBON 10K			
RV203	1-226-238-00	RES, ADJ, CARBON 50K			
RY1	1-515-529-11	RELAY			
S101	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S102	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S103	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S105	1-554-419-00	SWITCH, PUSH (1 KEY) DOLBY NR			
S201	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S202	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S203	1-554-756-11	SWITCH, PUSH (3 KEY) TAPE SELECTOR			
S301	1-516-870-00	SWITCH, SLIDE 1SS			
S401	1-552-412-00	SWITCH, KEY BOARD O REC MUTE			
S402	1-552-412-00	SWITCH, KEY BOARD ●, ▶ REC			
S403	1-552-412-00	SWITCH, KEY BOARD ▮▮ PAUSE			
S404	1-552-412-00	SWITCH, KEY BOARD ▶▶, ▶▶/◀◀ AMS			
S405	1-552-412-00	SWITCH, KEY BOARD ▶ FWD			
S406	1-552-412-00	SWITCH, KEY BOARD □, ▶ AUTO PLAY			
S407	1-552-412-00	SWITCH, KEY BOARD ◀ REV			
S408	1-552-412-00	SWITCH, KEY BOARD◀◀, ◀◀/▶▶ AMS			
S409	1-554-757-11	SWITCH, SLIDE TIMER STANDBY			
S410	1-552-370-00	SWITCH, SLIDE DIRECTION MODE			
S411	1-554-205-00	SWITCH, PUSH			
S412	1-554-205-00	SWITCH, PUSH ACCIDENTAL ERASER PREVENTION			

NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

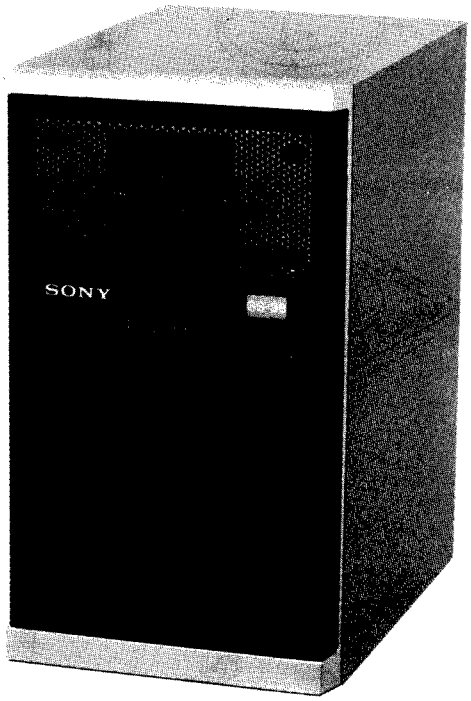
- MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

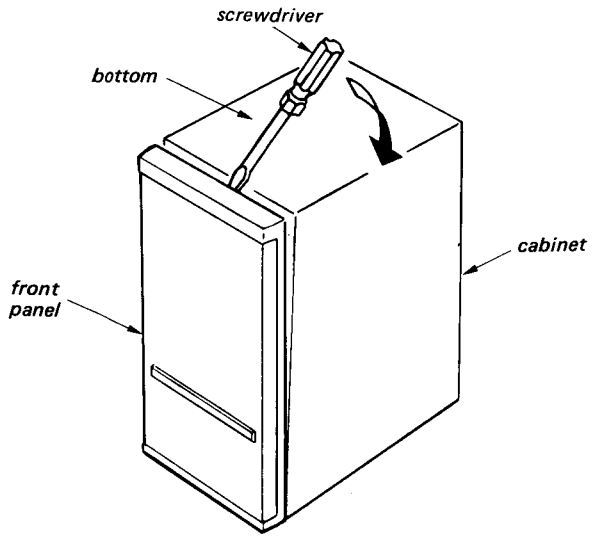
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SPEAKER SYSTEM
(SS-38)



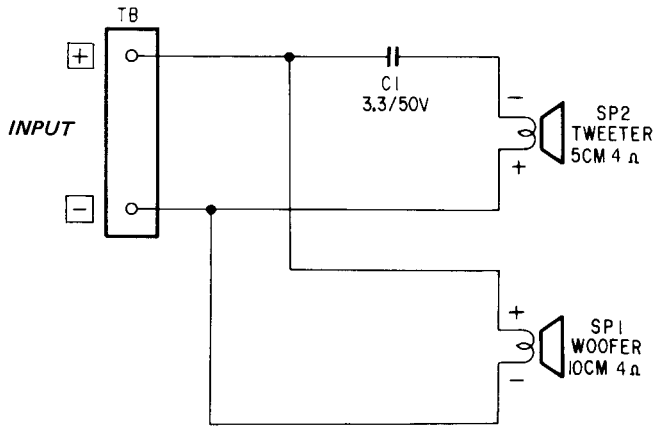
Note: SS-38 is a speaker system in FH-3.

1. DISASSEMBLY
FRONT PANEL REMOVAL



Note: Be careful not to scratch the cabinet.

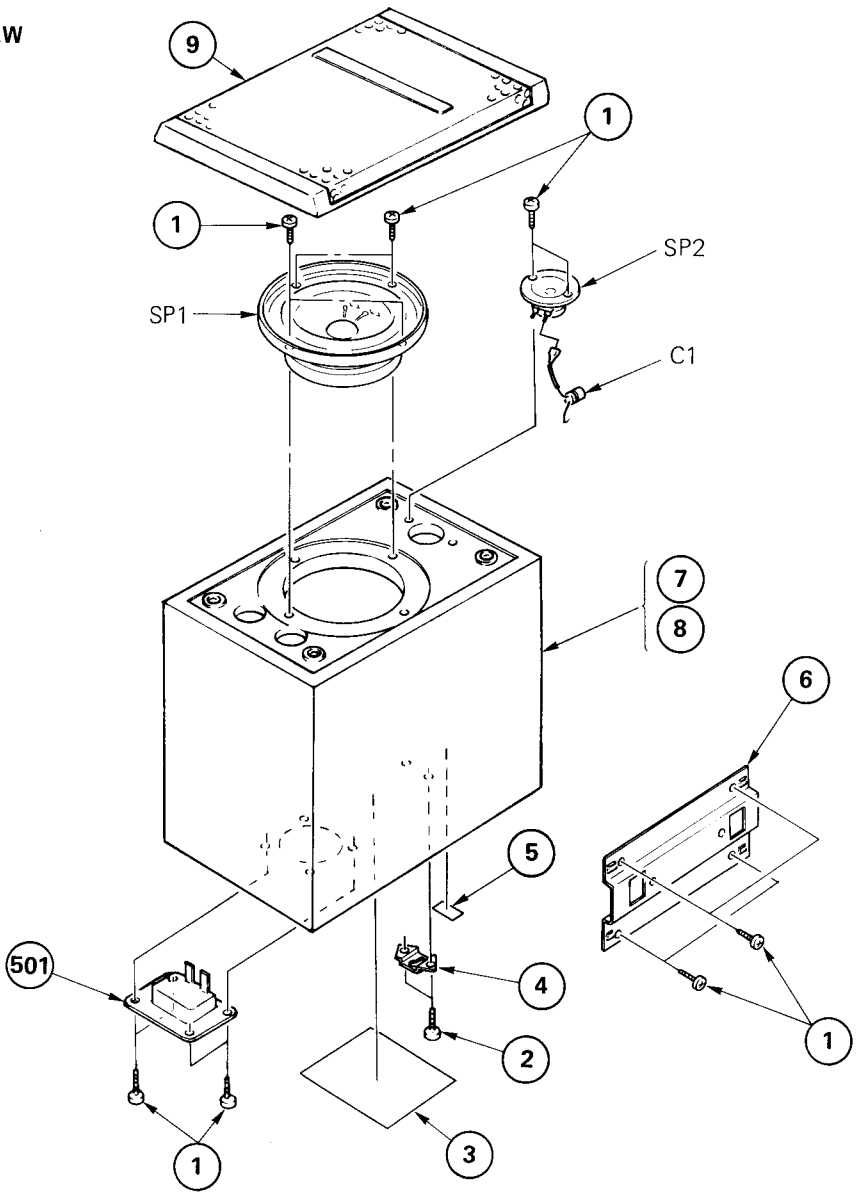
2. SCHEMATIC DIAGRAM



Note: All capacitors are in μF.

CAUTION:
Be careful to the polarity of the speaker when connecting the speaker.

3. EXPLODED VIEW



4. PARTS LIST

GENERAL SECTION

No.	Part No.	Description
1	4-874-614-11	SCREW (M3.5), + BV TAPPING
2	4-874-614-41	SCREW, TAPPING, BV (+)(3.5)
3 ♦	4-875-621-00	LABEL, CAUTION
4 ♦	4-883-903-11	HOOK
5	4-902-902-01	LABEL, MODEL NUMBER
6 ♦	4-902-981-01	(SILVER)...PLATE (B), SIDE
6 ♦	4-902-981-11	(BLACK)....PLATE (B), SIDE
6 ♦	4-902-981-21	(RED)......PLATE (B), SIDE
7	X-4902-932-1	(SILVER)...CABINET ASSY (RIGHT), SPEAKER
7	X-4902-932-2	(BLACK)....CABINET ASSY (RIGHT), SPEAKER
7	X-4902-932-3	(RED)......CABINET ASSY (RIGHT), SPEAKER
8	X-4902-933-1	(SILVER)...CABINET ASSY (LEFT), SPEAKER
8	X-4902-933-2	(BLACK)....CABINET ASSY (LEFT), SPEAKER
8	X-4902-933-3	(RED)......CABINET ASSY (LEFT), SPEAKER
9	X-4902-922-1	(SILVER)...PANEL ASSY (S), FRONT
9	X-4902-923-1	(BLACK)....PANEL ASSY (B), FRONT
9	X-4902-936-1	(RED)......PANEL ASSY (R), FRONT

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	♦ 1-536-832-11	TWEMINAL BOARD (SPEAKER)
C1	1-123-546-00	CAP, ELECT (NONPOLAR) 3.3MF 50V
SP1	8-927-159-00	SPEAKER UNIT (WOOFER)
SP2	1-503-324-11	SPEAKER (TWEETER)

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

MF:μF, PF:μμF.